University Archives

UNIVERSITY OF TORONTO

Bulletin

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Group will examine problems with ACCESS

AN IN-DEPTH analysis of the University's first fully-automated course selection system for arts and science students will be undertaken to correct the problems experienced this year.

At the Sept. 22 meeting of the Academic Board, Dean Robin Armstrong of the Faculty of Arts & Science said a fact-finding team will examine what went wrong with ACCESS (Assisted by Computer Course Enrolment and Sectioning System). Dean Gavin Smith, acting associate dean of the faculty, will head the investigation.

Registration lineups at the Drill Hall stretched in a circle up St. George St. along Bloor and back down Devonshire Place to St. George. Many students actually camped out at night to be first in line when the building opened in the morning.

"We're committed to doing something about it," Armstrong said. "We want to get as many facts as possible about what went wrong and what we can do about it."

He said the first phase of ACCESS went almost too well because it gave little indication of the problems ahead. With 94 percent of the forms filled, the University did not anticipate the number of students who would request changes.

"We had one student who made 20 changes in his college for a five-course program," Armstrong said.

The situation worsened as students began to worry about changing courses before sections were full, Armstrong noted.

Part of the problem occurred because the computer did not take academic program prerequisites into consideration when placing people in courses.

In addition, some fourth-year students

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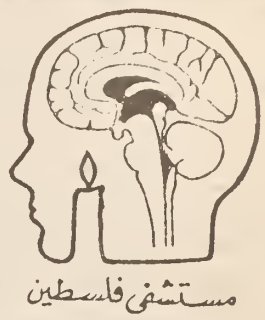


Logo for Palestine Hospital

Doctors help Jordanian institute find its feet

by Jane Stirling

HALF-WAY AROUND the world, a small hospital is gearing up for some big changes — changes that wouldn't have been possible without the help of U of T.

At the Palestine Hospital in Amman, Jordan, administrators are in the midst of establishing a first-rate neurological institute for the Middle East. It treats a wide range of nerve disorders, including brain and spinal tumors and head injuries.

With the help of a $895,000 donation from the Canadian International Development Agency (CIDA), the

See JORDANIAN : Page 2

New residences recommended

by Karina Dahlin

THE ADDITION of 1,000 to 1,500 residence spaces within the next five years has been recommended in a report of the Provostial Advisory Committee on Student Housing Policy.

"That is what our funding allows us to do, but 2,000 or 2,500 spaces would be better," said Professor Peter Silcox, chair of the 15-member advisory committee, in his presentation to the University Affairs Board Sept. 20.

Students apply elsewhere because of space problems

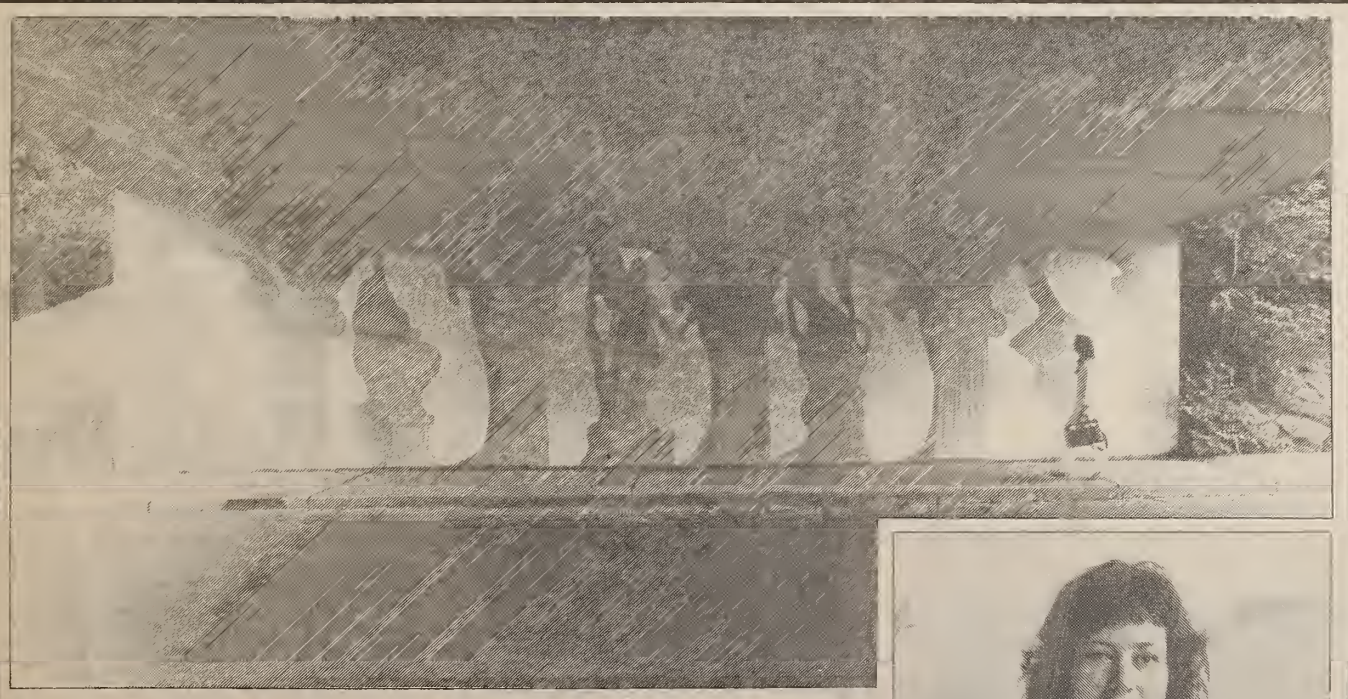
The report, commissioned by Provost Joan Foley in February, will form the basis of a draft housing policy. The policy will be considered by university affairs later this year and sent to Governing Council for approval early in 1989.

"The University cannot meet all housing requirements," Silcox said, "but it is important that the scarce goods be distributed fairly and that as many students as possible are given residence experience."

Students from Toronto should be given a greater opportunity to live on campus, he said. Currently, in most residences, those who come from farthest away are admitted first.

Donald Burwash, an alumni member of university affairs, endorsed the

See STUDENT : Page 2



PETER LEGRIS

Mural, mural on the wall

The passage under Queen's Park Cres. W., south of Hart House, has a new look thanks to Fiona Blair, 24, a graduate of the University's program in fine art. Roman columns and people in prehistoric landscapes now decorate the walls.

Blair designed the murals a couple of years ago, but University and City of Toronto approval procedures did not permit her to carry out the work until this summer, a year after she left the University. Brian Burchell, former SAC and Governing Council member, facilitated the approvals through SAC, the University and city hall. Blair chose a neoclassical motif to fit the architecture of the St. George campus and a cartoonist's style to show that the work is not "terribly serious."

She was assisted by approximately 20 students, most of them associated with the Students Administrative Council. SAC underwrote refreshment expenses while the University paid for the paint. Blair, now in the fashion program at Ryerson Polytechnical Institute, did not charge for her services, but may profit indirectly from the exercise. A city store has asked her to paint a mural.

New VPs in place

by George Cook

RECENT MONTHS have seen the creation of two new vice-presidential portfolios, for administration and human resources. In addition, Governing Council has approved a third portfolio for computing and communications systems.

Richard Criddle, 55, became vice-president — administration in August, after a 20-year career as a senior hospital administrator and director in Montreal and Halifax.

Criddle will be the senior assessor to the Business Board, which is responsible for three portfolios — administration, human resources and development and university relations.

Alec Pathy, formerly vice-president — business affairs, has moved to human resources, where he will bring his experience in labour relations and personnel management to bear on negotiations with the faculty and staff associations and other groups.

Jim Keffer, formerly vice-provost — professional faculties, takes over as vice-president — research, replacing David Nowlan, who completed his term in July.

Provost Joan Foley and Gordon Cressy, vice-president — development and university relations, continue at their posts.

In June, Governing Council approved the creation of a vice-presidency for computing and communications systems. At present, responsibility for administrative and research computers and communications systems is divided.

President George Connell and Dan Lang, assistant vice-president — planning, have begun to examine the reorganization of responsibilities that will

See ADMINISTRATIVE : Page 6

Staff implementing ACCESS 'near exhaustion'

Continued from Page 1

were unable to register immediately in the courses they need to graduate. Armstrong assured the board that no student will be prevented from taking a course necessary for graduation.

The staff involved in introducing ACCESS to 20,000 students on the St. George campus and 4,000 from Erindale, Scarborough and the professional faculties enrolled in arts and science courses is "near exhaustion," Armstrong said.

Their inability, under the circumstances, to provide quick service to waiting students has been a source of anxiety. "One person said it was similar to having a death in the family."

Catherine Moroz, a full-time undergraduate member of Governing Council and member of the Academic Board, said some handicapped students were seriously inconvenienced by the travel back and forth to the University to make course changes.

And Michael Bilaniuk, also a full-time undergraduate member, said engineering students avoided arts and science courses because of the long lineups.

ACCESS is designed to ensure the number of students in each course, section, tutorial and lab does not exceed a set maximum. The system was developed to help meet local fire regulations. The Toronto fire marshall ruled some lecture halls were overcrowded, especially in September when course sections are at their largest, and placed a limit on the number of students who could be accommodated at each location.

This ruling meant the University had to plan course sections in advance to keep the numbers to acceptable limits. Course selection forms had to be submitted by July 25 instead of the usual mid-September date, giving the computer time to generate the required distribution of students.

Special committee to promote Native students

A SPECIAL committee has been established to find ways to promote the entry of Native students into the University's professional degree programs. Chaired by Principal J.E. Chamberlin of New College, the committee will consider counselling and tutorial arrangements for native students and courses leading to admission to degree programs. The committee is to report to Academic Board by Dec. 1.

JEWEL RANDOLPH

The Academic Board held its inaugural meeting in the council chamber of Simcoe Hall Sept. 22. Chaired by Professor Mike Uzumeri of the Department of Mechanical Engineering, the 114-member Board replaces two Governing Council committees — academic affairs and planning and resources. It has broad powers to set academic policy for the University.

Jordanian centre will be fully operational in five years

Continued from Page 1

Palestine Hospital has established a medical exchange program with the University.

The five-year training program at the 50-bed facility will produce skilled Middle Eastern graduates in medical and paramedical neurological sciences, said Dr. Fred Gentili, assistant professor in the Department of Surgery and Canadian coordinator of the project.

During the first three years, U of T will send nurses, physiotherapists and neurosurgeons to Amman to train local health personnel. From years three to five, there will also be an exchange of medical staff from Amman to Canada.

Driving force

Dr. Nasri Khoury, 34, director of the Palestine Hospital, was the driving force behind the institute. After completing his neurological training at U of T in 1985, he returned to Jordan intent on establishing the institute.

He approached dignitaries, royalty and government officials to rally financial support. As well as the CIDA donation, he received seven heart monitors worth $40,000 from the Canadian embassy in Jordan, $20,000 for equipment from the British embassy and $100,000 from the Presiding Bishop's Fund for World Relief in New York.

Gentili, along with Dr. Alan Hudson, head of U of T's neurosurgery program, spent two weeks in Jordan last month ironing out program details.

The exchange project makes good use of Canadian expertise, Gentili said. "I think this idea is one anyone would be interested in. You're helping a third world country and you feel you're doing something special."

A shortage of nurses is the only difficulty so far. The plans call for an exchange of three nurses but the shortage in Canada is so acute that the quota may not be filled until next year.

Currently, a nurse-clinician from Sunnybrook Medical Centre is in Amman to assess the situation.

The institute is still in the process of obtaining diagnostic and physiotherapy equipment but Gentili estimates the neurological science centre will be fully operational in five years.

Although there are other hospitals in Jordan that provide neurosurgical care, their facilities are insufficient. In the three public hospitals that provide this kind of treatment, only 37 beds are specifically allocated for neurosurgery, despite the fact that 80 to 100 beds are usually occupied by neurosurgical patients.

The space problems are compounded by the problems of accessibility. Because Jordan offers no universal medical insurance, many people cannot pay for the expensive treatment.

For these patients, Khoury has established the Society for Care of Neurological Patients, a charitable organization that will help pay the hospital bills.

King Hussein of Jordan, centre, attended the opening of Palestine Hospital's neurological unit. Others present included, from left, Nasri Khoury, director of the hospital; Alan Hudson, professor and head, U of T's division of neurosurgery; Fred Gentili; and Sami Khoury, founder of the hospital.

Student housing policy

Continued from Page 1

report. "It confirms the reason why students don't apply. They go somewhere else because they cannot get residence places here."

In July, Queen's Park approved an application from U of T for $11.3 million for 868 new spaces. Robin Toderian, acting director of residence, food and beverage services said it is too early to tell how many spaces in excess of 868 the University will be able to afford and no decision has yet been made on sites for new construction.

Currently, there are 3,750 spaces downtown, 2,100 of them at the federated colleges. Erindale College has 661 spaces, Scarborough 394.

Needs differ

The advisory committee divided the student population into two groups. "First entry" students include undergraduates who are often experiencing life away from home for the first time. The "second entry" group has some university education and is usually more mature than the first.

Ultimately, a place in residence should be available to all first-entry students who want it, the report says. It recommends that:

- residence admission policies promote a mix of students, ensuring that at least 50 percent of the spaces are allocated to those in first year
- spaces be allocated to those who have not yet lived in residence
- there be no discrimination on the basis of geographical considerations, except to encourage geographic diversity
- beyond the first year, places be offered on the basis of mixed criteria including academic achievement and contribution to community life in a residence, college or faculty.

Second-entry students are often those in graduate school or professional programs. The report recommends that, ultimately, affordable housing should be available to all full-time, second-entry students.

However, because this is impossible at present, priority should be given to:

- students from outside commuting distance
- those enrolled in longer programs
- those enrolled in programs which require access to campus facilities
- those at a disadvantage as a result of the tight off-campus housing market.

In demand

Family housing is also in demand. At present, the waiting list for the 720 units on Charles St. set aside for married students equals the number of units available.

Priority should be given to full-time married students coming to U of T for the first time and to those who have children, says the report. Income levels should also be considered in the assignment of places.

Child care facilities should be included in new family housing, as long as capital and operating costs are funded separately from the residences.

There is also an urgent need for housing for disabled students, and the report recommends that new residences be made accessible to this group.

"The lack of such spaces has almost certainly limited attendance by disabled students at the University," it notes.

Residences should receive no operating subsidy from the University. However, the University should subsidize capital costs for construction of residences "to the extent necessary to insure affordable rates."

Rates would cover a portion of capital costs, annual operating expenses, replacements costs for furnishings, and equipment and an allowance for repairs and replacement.

When approved, the student housing policy should ensure that the University, through the provost's office, has the ultimate responsibility for residences.

However, day-to-day administration should be decentralized and be the responsibility of the arts and science colleges for all first-entry undergraduates.

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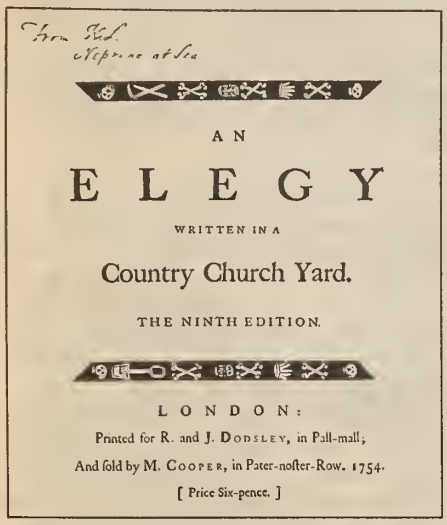
National treasure to library

by Peter O'Brien

JAMES WOLFE'S COPY of *An Elegy Written in a Country Church Yard*, which he read the night before he died on the Plains of Abraham, has been given to the University by the Friends of the Thomas Fisher Rare Book Library. The poem by Thomas Gray, a meditation on death, is one of the most famous in the language.

According to contemporary accounts, Wolfe recalled the line "The paths of glory lead but to the grave" as he went up the St. Lawrence River on the eve of the battle. "Gentleman, I would rather have written that piece than take Quebec tomorrow," he is said to have told his compatriots. The next day, Sept. 13, 1759, his forces defeated the French, but the young general was killed in battle. His successful campaign marked the beginning of British rule in Canada.


AN
ELEGY
WRITTEN IN A
Country Church Yard.
THE NINTH EDITION.
LONDON:
Printed for R. and J. DODSLEY, in Pall-mall;
And sold by M. COOPER, in Pater-noster-Row. 1754.
[Price Six-pence.]

The title page of Wolfe's copy of the poem. Of note are the two heavy borders, complete with skulls, spade, cross-bones and crowns.

A gift from his financée, Katherine Lowther, to carry on his 1759 voyage to Canada aboard the *Neptune*, Wolfe's copy of the *Elegy* was printed in London by R. and J. Dodsley in 1754. Annotated throughout in the general's hand, the title page is inscribed "From K.L. Neptune at Sea."

When the friends of the Fisher present the book to the library Oct. 4 it will become the seven millionth volume in the University's collection.

The federal Cultural Properties Review Board met most of the purchase price of $325,000 (US) under its repatriation program for significant Canadiana. The friends of the Fisher provided the remainder of the funding.

Richard Landon, head of the rare books library, persuaded the current owner to part with the volume. The sale was negotiated through a dealer, who asked initially for $500,000 (US). "I whittled the price down from there," Landon said.

Heritage

The *Elegy* has been in private hands outside Canada since it was returned to Katherine Lowther after Wolfe's death. A Philadelphia family acquired it in 1916. "We're very excited and proud to bring the book back to Canada," said Alan Horne, director of development and public affairs for the University library.

Landon considers the book a national treasure. "It is an evocative piece of our heritage, similar to George Vancouver's sword or Champlain's astrolabe," he said. "We have an obligation to repatriate it and bring it into public view."

The acquisition will also further research, Landon noted. Wolfe's romantic image of the military hero was influenced by the *Elegy*. "It had a profound effect on Wolfe and consequently on Canadian history. The poem is important to his career and research could be done along those lines." The annotations are of particular interest, Horne said.

The Fisher Library houses many rare books and special collections, including one of the great collections of Canadiana, particularly 18th-century material.

Among the Fisher's other holdings are two copies of *The Neuremburg Chronicle* of 1493, one of the world's first extensively illustrated books, and three copies of the first edition of *The Origin of Species* by Charles Darwin. The library also has large collections in Shakespeare and the history of medicine.

Wolfe's copy of Gray's *Elegy* will be on display at the library Monday through Friday, 9 a.m. to 5 p.m. beginning Oct. 5.

Innovations Foundation wins a bronze medal

THE UNIVERSITY'S Innovations Foundation has won a bronze medal for business excellence from the federal government. The foundation was awarded the medal, in the invention category, for a process that prevents tooth decay.

Professor H.J. Sandham of the Faculty of Dentistry and Dr. Thomas Balanyk have developed a two-step procedure to kill the bacteria responsible for cavities. Balanyk, now in private practice, studied dentistry at U of T.

The Innovations Foundation funded the research, with assistance from the National Research Council, the Medical Research Council and APO Diagnostics, the Markham-based company that holds the licencing rights.

The procedure involves the use of a solution and varnish applied to teeth to kill *Streptococcus mutans*, a bacterium. First, a chlorzoin solution is applied, followed by a sealer varnish to protect the first coat until it can eliminate all the bacteria.

"It's taken a lot of head scratching to come up with the answer of the two-coat process," said Ralph Rethoret, manager of medical projects for the Innovations Foundation.

The process will take about 30 minutes in the dentist's chair. Although the varnish dissolves in about five days, its protective effects last longer.

The two-coat process will be marketed in the near future, said Max Marmel, president of APO Diagnostics. A federal regulatory body is currently examining the product.

Although it will be targeted specifically at developing countries and poor regions where dental hygiene and fluoridation are lacking, Marmel plans world-wide promotion.

"You get direct benefits from the process," he said. "Dentists can monitor the results and see what effect it has on the *Strep mutans*."

Sandham and Balanyk have worked on the procedure for seven years and will continue for at least four more. Further research will focus on the transmission of *Strep mutans* from parents to children, Sandham said.

The Innovations Foundation holds the patent to the chlorzoin solution and sealant.

Last year, the foundation won a bronze medal at the business awards' ceremony for canola oil extraction.

Dental research team awarded six-year grant

THE MEDICAL Research Council has awarded a five-member research team in the Faculty of Dentistry $890,000 a year for six years to study the connective tissues — bones and gums — that support teeth.

The researchers have already made significant advances in the study of bone formation and break-down, said Professor Jaro Sodek, a biochemist, director of the project.

The five are also looking for ways to measure electrical activity at cell surfaces, monitor periodontal disease and measure the recovery rate of periodontal tissue.

The group expects its research to lead to better ways of treating gum diseases and stabilizing tooth implants.

Other members of the team are Jane Aubin, Jack Ferrier, Johan Heersche and Mary Waye. It specializes in cell biology, electrophysiology, endocrinology and molecular biology.

Moss scholar debates in Moscow and Kiev

PAUL PATON is a duellist. And his latest battle ground is the Soviet Union. But this 22-year-old U of T graduate doesn't tote guns. His weapons are words.

Paton, this year's winner of the J.H. Moss scholarship for academic and extra-curricular excellence, is in the USSR to debate. He is part of a four-person Canadian delegation participating in a series of exhibitions with Soviet and American teams.

"I'm intrigued to see how open the speeches will be and how much the students will imitate their governments' policies," Paton said, prior to his Sept. 21 departure. "It will also be interesting to see if we can work any humour in."

Topics include the merits of individual liberty versus communal responsibilities, whether NATO and the Warsaw Pact are obsolete, the merits of cooperation in space exploration and research and whether third world countries are given their due in the world community.

Paton said he is familiar with the topics "in a general sense" but will read his school notes and meet other team members to plan strategy.

He graduated this year with a BA in international relations. After his week-long visit to the Soviet Union, he will begin his first term as a graduate student at the University of Cambridge in the same field.

President of the University debating team in 1986-87, Paton has been involved in the activity for the past four years. Last year he and his partner, Diane Brady, won the Canadian university championships and placed 18th out of 90 teams at the world competition in Australia in January. Paton himself finished fourth in the public speaking segment.

In the Soviet Union he will be joined by three other Canadian students from Alberta, Quebec and Newfoundland, as well as teams from the United States and the USSR. Brady will accompany the Canadians as a student journalist.

The four debates — two in Moscow, two in Kiev — will not be judged.

U of T DAY 88
Saturday, October 15

by Karina Dahlin

U OF T DAY, Oct. 15, can be enjoyed in many ways. Philosopher's Walk could be the place to start. There, at 10 a.m., an eight-foot-tall oak tree will be planted, symbolically at least, by dignitaries including Dean Rod Carrow of the Faculty of Forestry and John Somerville of Aliston, Ont.

Somerville, a U of T alumnus and the proprietor of a nursery, will donate the tree. The multi-stemmed oak with its 400-pound root ball will be lowered into the ground about a week before the official planting occasion, said Les Hubbard of the physical plant department.

U of T Day is an annual event, celebrated for the third time this year. The University invites everyone to experience the many activities planned for the occasion. The day starts at 10 a.m. and finishes at 4 p.m. It's a chance for those in the humanities, for example, to see what's going on in the sciences, and vice versa.

At University College 29 displays in the East and West Halls will show some of the research that is done in the humanities and social sciences.

"We try to make people realize that humanities research is about the ideas and imaginations of people; that it is exciting, not esoteric and far removed," said Francess Halpenny, coordinator of the humanities fair.

Hunk Award

From noon to 4 p.m., Woodsworth College will present the Backwoods Folk Club broadcast live on Radio Station CIUT. Organizers expect many folk musicians to participate in the contest for the "Golden Hunk of Rusty Iron Award." People dressed up as pink flamingos will do their best to attract as many visitors as possible to Woodsworth College and the club.

During half-time at the afternoon football game at Varsity Stadium, up to 21 U of T athletes just back from the Olympics in Seoul, South Korea, will be introduced. In addition, a chariot race is scheduled with people-powered floats from the parade earlier in the day.

At the Faculty of Medicine open house, visitors can watch "Glory Enough for All," a new film about Fred Banting and Charles Best. The show is a 30-minute review of a two-hour special about the discoverers of insulin to be broadcast on CBC TV Oct. 16 and 17 at 8 p.m.

The 14,500 U of T graduates from 1983 and 1978 have been invited to attend the day as this fall's honoured alumni. A reception hosted by President George Connell will be held in the big tent on the front campus from 4 p.m. to 6 p.m. for the graduates and their families. Other reunions are planned by the Faculty of Applied Science & Engineering, and by Erindale and St. Michael's Colleges.

Five and 10-year graduates have not been honoured this way before, but Alumni Affairs hopes to make it a tradition. The University would like to stay in touch with young alumni and finds a 25th reunion is too long to wait.

U of T Day guests are not expected to spend much money, but those who want to carry home a souvenir can visit the University of Toronto Women's Association's craft show and sale at Simcoe Hall. Food and beverages will be sold in the 17,000 square foot T-shaped tent on the front campus. Proceeds from the refreshment booths will be donated to the United Way.

March move-in planned for Earth Sciences Centre

by Jane Stirling

Plan changes, strikes cause delays

THE $57.5 MILLION Earth Sciences Centre will be completed in February 1989, three months later than planned.

The building on the south-west corner of Willcocks and Huron Sts. was scheduled for completion in November but a series of trade union strikes has pushed the date back to February, said Robert Crouse, director of the University's physical plant.

Carpenters, electricians and plumbers staged successive strikes starting in early May and lasting until mid-July.

The actual interruption lasted about eight weeks, said Brian McCormack, project manager, but the lost momentum created further delays.

Crouse said faculty members will begin to move in March. The students will transfer to the facility following April exams.

The research and teaching complex will house the University's Faculty of Forestry and the Departments of Geology and Botany.

There will be 229 offices, 74 labs, five lecture rooms (seating a total of 300 people), a library, a 400-seat auditorium, a snack bar and 10 lounges.

Cost of the centre has jumped from an estimated $46 million in 1986 to $57.5 million this summer. Price inflation in the booming Toronto construction market, shortages of some building materials and design changes have contributed to the higher expenditures.

The most recent cost increases can be attributed to architectural revisions made after February 1987. Crouse said minor changes were made to labs and the greenhouse to enhance building function.

Plans for the centre began in the early 1980s and received a major boost when the Conservative government of former premier William Davis approved a $30.6 million allocation under the Board of Industrial Leadership & Development program (BILD) in 1983.

The BILD program was discontinued in 1985 by the Liberals and all projects were reviewed. Despite the University's concern that the centre would be built in northern Ontario, the province finally approved the initial plans in August 1986.

Along with funds from the Ministry of Colleges & Universities, U of T allotted $8.8 million from Update, its last major fundraising drive.

Industry donations

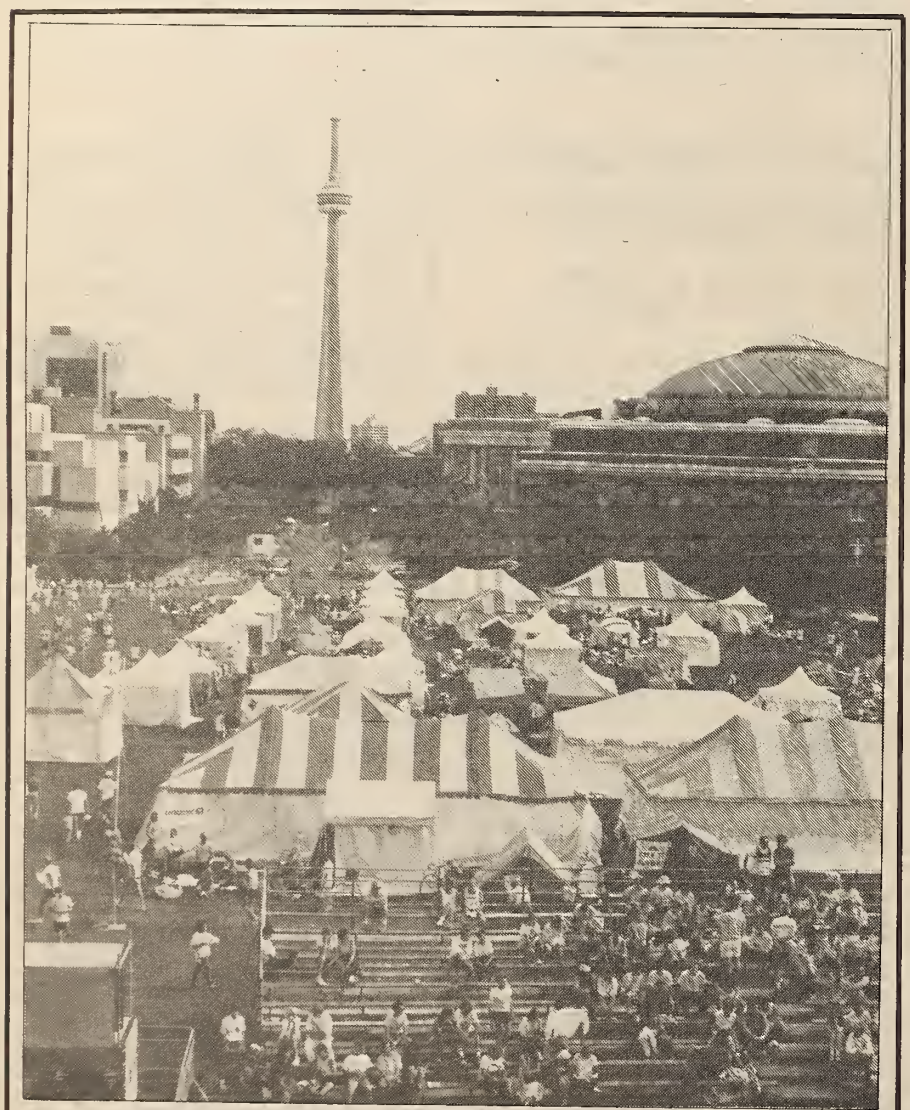
Janice Oliver, assistant vice-president (facilities and administrative systems), said $2 million was allocated from the University's general building fund in June 1987, and $12 million will come from Breakthrough, the $100 million fundraising venture, now under way. The funds from Breakthrough include corporate donations from mining and forestry industries.

Interest costs of about $2 million on money borrowed for the centre will come from the University's operating fund.

At the last Governing Council meeting in June, members approved borrowing the remaining $2.1 million.

Construction on the project began in July 1986. The completed building will include the Faculty of Forestry on Willcocks St., the Department of Geology, south of Bancroft Ave. on Huron St. and the Department of Botany, north of Bancroft on Huron.

The original proposal called for the inclusion of the Departments of Anthropology and Geography and the Institute for Environmental Studies, but cost considerations forced a revision and the final plans were scaled down.



PETER LEGRIS

Running for the ROM

During the Run for the ROM the front campus became a sea of tents. The annual 24-hour run, which started this year at 8 p.m. Sept. 9, is the major fundraiser for the museum. One hundred and twenty-four teams took part. Each team had 16 to 20 runners.

U of T fielded three teams: Trinity College Upstarts, U of T Police and Pheidippedes Fleet Feet. Pheidippedes was the Athenian courier who ran from Marathon to Athens with news of victory. He dropped dead from exhaustion. According to David Jeu, United Way campaign co-ordinator, who named the team, none of his team experienced the same fate.

centre for medieval studies

The Bertie Wilkinson Memorial Lecture for 1988

C. Warren Hollister

University of California, Santa Barbara

William Rufus: Terror of the Church

Thursday, October 6, 1988 at 4:10 p.m.
Senate Chamber, Alumni Hall, St. Michael's College
4th Floor, 121 St. Joseph Street
Reception to follow, Bertie Wilkinson Lounge, CMS

Historical Atlas stacks up the prizes

THE HISTORICAL ATLAS OF CANADA has won the Sir John A. MacDonald Prize for the best book in Canadian history of 1987. The prize is sponsored by the Canadian Historical Association.

The atlas has also won a gold medal from the Royal Canadian Geographical Society, the Book of the Year Award from the Canadian Studies Association and an award of special merit from the American Society for Environmental History.

In addition, University cartographer Geoffrey Matthews has received the Award for Service to the Profession of Geography from the Canadian Association of Geographers.

Published last year by University of Toronto Press, the first volume of the atlas, "From the beginning to 1800," was edited by Professor Cole Harris of the University of British Columbia. Matthews designed and supervised the making of 70 colour plates — the result of research by 58 authors.

Professor William Dean of the Department of Geography is the project director. Volume three, on the 20th century, will appear in 1989; volume two, on the 19th, in 1992. The atlas project is headquartered in Sidney Smith Hall.

Nota Bene

Cinader and Miller honoured

PROFESSORS Bernhard Cinader of the Departments of Immunology and Clinical Biochemistry and Richard Miller, chair of immunology, were two of eight North Americans awarded the Jan E. Purkyne Medal in July by the Czechoslovak Medical Association for their contributions to medical science. Cinader was also awarded a diploma *sodalem honoris causa*, for achievements in medicine and culture.

Terman award for Sedra

FOR HIS contributions to education and his co-authorship of an influential engineering textbook, Professor Adel Sedra, chair of the Department of Electrical Engineering, received the Frederick Emmons Terman Award from the American Society for Education Excellence at its annual meeting in Portland, Oregon, in June.

Sedra and colleague Professor K.C. Smith first published *Microelectronic Circuits* in 1982. A second edition appeared last year and the book — called "the dominant text in its field" by the ASEE — is now in use at about 100 universities around the world.

Piggott receives Delmonte award

PROFESSOR Michael Piggott of the Department of Chemical Engineering & Applied Chemistry has received the Delmonte Award for his invention of a method to strengthen carbon fibres and create a "super epoxy."

His research has lead to the development of reinforced plastic for use in aircraft and space vehicles. Piggott is currently seeking a company to manufacture the product for commercial sale.

The Society for the Advancement of Materials & Process Engineering presented the award at its conference in Anaheim, California, last spring. SAMPE has more than 10,000 members and 40 chapters world-wide, one of which meets regularly in Toronto.

Schlesinger wins LaFreniere award

PROFESSOR Ben Schlesinger of the Faculty of Social Work has won the 1988 Leo LaFreniere Memorial Award for his contributions to family life education in Ontario. The award was presented by the Family Life Educators' Association at its annual conference in Mississauga last spring.

Magocsi wins Fry award

PROFESSOR PAUL MAGOCSI of the Departments of History and Political Science has won the Bernard M. Fry Award for the best article in *Government Publications Review*, a US journal. Magocsi holds U of T's Chair in Ukrainian Studies.

He received the award at the American Library Association's annual conference in New Orleans in July.

The 35-page article, "Are the Armenians Really Russians? — Or How the U.S. Census Bureau Classifies America's Ethnic Groups," appeared in vol. 14, no. 2 of the review.

Radforth wins honorable mention

PROFESSOR Ian Radforth of the Department of History received an honorable mention from the Canadian Historical Association for *Bushworkers and Bosses: Logging in Northern Ontario, 1900-1980*, published by the University of Toronto Press.

Celebrating the United Way

JEWEL RANDOLPH

Minister of State for Finance Tom Hockin (left) shares anecdote with President George Connell, Vice-President Gordon Cressy and alumni affairs executive director Rivi Frankle at Queen's Park Sept. 22 during the official launch of this year's United Way campaign. Cressy and Frankle will chair the U of T drive. The University hopes to raise $530,000 and to increase the staff participation rate to about 50 percent, up 10 points from last year. The Lady Godiva Memorial Band kept everyone smiling with its original performance.

Centre of Excellence sought for Pratt building

A LETTER of intent is on its way to Ottawa telling the federal government that the University plans to apply for funding for a new centre of excellence at the Pratt Building.

Construction on the building is scheduled to start Jan. 1. Three floors will be added to the single-storied metallurgy wing of the Wallberg Building and renamed as the Pratt Building.

Professor Andy Salama of electrical engineering says the centre will specialize in information technology. The federal government is expected to announce in April where funding for the new centres of excellence will go.

If U of T is a winner in the competition, its centre will be housed in the same building as the provincial centre of excellence, the Information Technology Research Centre (ITRC), a joint venture of U of T and the University of Waterloo.

The Pratt Building, which will be completed in 1990, is a perfect setting for the two centres, said Salama. In fact, it may enhance the University's chances of obtaining the federal monies.

A model of the Pratt Building was unveiled Sept. 22 by Lucile Pratt and her sister Margaret Robinson in the atrium of the Sandford Fleming Building. Pratt is the widow of Lorne Pratt, a 1922 engineering graduate. He died in 1969 and left funds in trust for his wife stipulating that they provide for her support and then be given to the University.

Lucile Pratt has contributed $6.2 million to the new building. Another $1.9 million will come from the Ministry of Colleges & Universities, while an annual $1 million in rental fees will come from the ITRC. Other occupants are the Departments of Electrical Engineering and Computer Science and the Computer Systems Research Institute.

Undergraduate education advisory committee

A COMMITTEE has been established to advise the provost on the appointment of a faculty member to the position of special adviser to the vice-president and provost on undergraduate education. Members are: Professor Joan E. Foley, vice-president and provost (*chair*); Professor Joan Brailey, chair, undergraduate program, Faculty of Nursing; Professor John Browne, principal, Innis College; Professor Eleanor Cook, associate dean, humanities, Faculty of Arts & Science; Kenlynne Duke, president, Arts & Science Students' Union; Alexis Kennedy, university affairs commissioner, Students' Administrative Council; Carole Moore, chief librarian, University of Toronto Library; Dr. Edward M. Sellers, associate dean, academic affairs, Faculty of Medicine; Professor Arthur Sherk, vice-principal, University College; Professor David Trott, acting associate dean, humanities and part-time studies, Erindale College; Professor John Warden, associate dean, academic, Scarborough College; Professor George Will, associate dean, Faculty of Applied Science & Engineering; and Ruth Maloney, Office of the Provost (*secretary*).

The special adviser will report to the provost and will work closely with the assistant vice-president of student affairs to develop proposals for action in cooperation with the faculties and colleges.

Nominations and comments are welcome and may be submitted to Ruth Maloney, room 225, Simcoe Hall or to any member of the committee as soon as possible.

Editor's Notebook

False advertising? Liberty University recently began a mandatory drug-testing program, according to an article in *The Chronicle of Higher Education*. Liberty students have apparently consented to the testing without protest since the program was announced last spring by Rev. Jerry Falwell, chancellor of the university. Staff and faculty have been asked to participate voluntarily. No word was given on their response to the request. It was reported that Falwell was to set an example by being the first to give a urine sample.

***

The **Dictionary of Canadian Biography** would like to hear from scholars working on biographies of Canadians who died between 1901 and 1925, especially those who are not among the leading figures of the period. Anyone interested in writing a biographical entry for the volume should contact the DCB, in English or French, at 243 College St., fourth floor, Toronto, Ont., M5T 1R5.

***

Tom Robinson

Tom Robinson, dean of the School of Graduate Studies, was made an honorary citizen of Samos, Greece (birthplace of Pythagoras) on Aug. 30. The honour is in recognition of his contributions to our understanding of the beginnings of Western philosophy and science. "It was a total experience," said Robinson. "I always did think pre-socratic thinking deserved to be better appreciated. But singing and dancing in the streets? Had I known in advance I'd have brought along my bouzouki."

***

What, was he denied **tenure**? Excerpts from an article by Frank Jones in *The Toronto Star*: "Perhaps it's time that Canadian provinces . . . considered ending tenure, an outdated system that blocks social change and enshrines mediocrity in our higher education system. . . . It's a meal ticket for life, a buttress against nearly all the vicissitudes that batter lowlier folk. . . . Once achieved, tenure means that, short of raping a student or burning the place down, a professor cannot be removed."

***

Patricia Parr

When you go see *The Good Mother*, starring Diane Keaton, don't be fooled by those talented fingers tickling the ivories. They belong not to Keaton, but to Professor **Patricia Parr** of the Faculty of Music, who provided the close-ups. Parr performed Bartok, Mozart and Shubert. Another unsung U of T connection: fourth-year piano student Susan Greenway was hired by Touchstone Pictures to coach Keaton on how to play.

***

An engineering professor would be justified in demanding a nine-month **salary** of $167,977 at Ohio State and $269,340 at Stanford, according to Donald D. Glower, dean of engineering at Ohio. He based his calculations on the "business value" of engineering graduates.

If that isn't enough to frighten all non-engineers, how about this: it's generally assumed that 90 percent of engineers who ever lived are alive and working today.

***

More on **knowledge as wealth**, this from an article by Robert E. Ankli in *The Globe and Mail*: "Knowledge is productive. Education has become the key to opportunity and promotion. This is why students demand marketable skills."

Talk like this is enough to make an arts grad hide his head in the sand, if only sand weren't so damn expensive these days.

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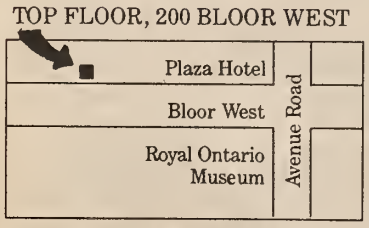

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Administrative responsibilities

Continued from Page 1

accompany the appointment of the new vice-president.

The creation of portfolios for administration, human resources and computing will bring the number of vice-presidents to six, two more than in recent years.

Responsibilities

Jim Keffer, the new vice-president — research, describes himself as "one of those peculiar animals who got all three degrees at U of T."

After receiving his Ph.D. in mechanical engineering in 1964, he joined the University of Cambridge's Cavendish lab as a post-doctoral fellow. After two years at Cambridge, he accepted an assistant professorship in the University's Department of Mechanical Engineering.

Keffer said he thinks the University is well placed to respond to public sector research initiatives — the provincial and federal centres of excellence programs, for example — that target money for particular purposes, but he promises a "balance of effort" to ensure that all areas of research and scholarship receive the attention they deserve.

"We can have it both ways. We can have our targeted research and our basic research. A university as varied and strong as this one can do it all."

While they are only part of the range of activity, the Ontario centres of excellence have created new opportunities for research at U of T and elsewhere.

"Our space is rather limited, so right now we're trying to cope with the problems created by the centres with respect to both space and financing."

Keffer thinks the federal government's matching grants program has helped maintain base funding for the granting councils, but has done little to encourage university-industry interaction.

Nevertheless, the points of contact have multiplied in the past two years, a development Keffer attributes to "the energy and inspiration" of university researchers. "I think we recognize the benefits of making our science and scholarship useful to the community at large."

Halifax

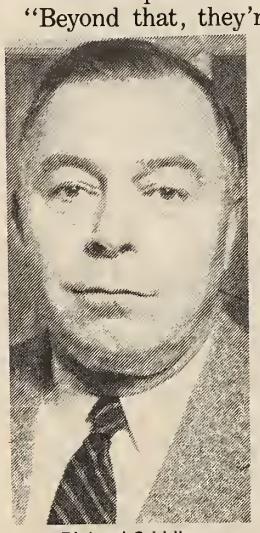
Criddle comes to the University from Victoria General Hospital in Halifax, where he was director. A chartered accountant, he attended Sir George Williams (now Concordia University) and McGill University in Montreal.

As vice-president — administration, he will be responsible for physical plant operations, business system and finance.

Hospitals and universities are similar in some respects, Criddle said. The relationship between the administration and the medical staff of a hospital resembles the one between the administration and teaching staff.

Both hospitals and universities require a constant effort to ensure that administrative staff are aware of the importance of their work to the institution as a whole and both have boards to ensure internal and public accountability.

"Beyond that, they're both not-for-profit institutions, which places certain proscriptions on what you can and can't do."


Richard Criddle

Criddle has begun to review the operations in his jurisdiction, asset management in particular. He would like to enhance the University's ability to generate revenue.

"The more we can earn from our activities, the less dependent we'll be on the government," he said.

Jim Keffer

He would also like to develop five-year capital budgets to complement the five-year capital plans. "I think it's essential that we begin forecasting and planning the money as well as we plan the buildings. That's something the Business Board will attend to this winter."

He will also look carefully at the University's property holdings to see where further development can take place. "I don't think profit is a dirty word. There are activities within the University that could be profitable. Parts of those properties might be developed on a commercial basis.

"Along the way there may have to be some major decisions, but they won't be made solely by the Business Board, they'll be a result of general discussions."

Forty centres proposed

BY THE END OF September, U of T scientists and scholars will have submitted about 40 preliminary proposals for federal centres of excellence.

Of these, about 30 are from principle researchers, 10 from those associated with projects based elsewhere. The proposals cover a wide range of endeavours — protein structure, technology management, the nature of intellectual property and many others.

The competition is open to the pure and applied sciences, social sciences and humanities.

Ottawa has promised a total of $200 million for 15 to 20 centres across Canada. The federal centres, like the provincial ones, will involve networks of researchers based at different institutions.

The preliminary proposals — letters of intent — will be evaluated by a federal council, chaired by former U of T president John Evans, and returned to applicants with comments.

Final proposals must be submitted to Ottawa by the end of November. At that time, the Evans council will rank the projects and forward recommendations for funding to cabinet for approval.

In Memoriam

JOHN WENDELL HOLMES, professor of international relations and member of the Order of Canada, Aug. 13.

Holmes was a professor of international relations at U of T from 1967 until his death. During the 1980-81 school term, he was U of T's Claude T. Bissell Visiting Professor of Canadian-American Relations.

Born in 1910 in London, Ont., Holmes received his BA from the University of Western Ontario in 1932 and his MA from U of T in 1933.

After attending the University of London from 1938 to 1940, he began a career in the department of external affairs culminating in the position of assistant under-secretary of state, a post he held until 1960.

After leaving the department, he became director-general of the Canadian Institute of International Affairs, a position he remained in for 13 years.

During his career, he was awarded the Order of Canada in 1969 and three honorary degrees. He was also made a Fellow of the Royal Society of Canada in 1986.

A memorial service will be held on Tuesday, Sept. 27, at 4 p.m. in the auditorium of the Medical Sciences Building.

ROBERT WYLIE McCABE, professor emeritus of urban and regional planning, Aug. 23.

A native of Toronto, McCabe received a BA in 1942 from Trinity College. From 1942 to 1945 he was a major in the Irish Regiment of Canada and served as aide-de-camp to General Charles Foulkes. After the war he returned to U of T and in 1947 received his masters degree in political economy. For the next 16 years he held several executive positions with the T. Eaton Company. He then left the company to pursue a new career in urban planning.

McCabe returned to U of T and obtained a diploma in town and regional planning in 1964 and, the following year, a master of science degree in urban and regional planning. At the age of 52 he received his doctorate in management studies from the University.

After working for the Toronto Planning Board for three years, McCabe became a planning consultant and worked all over the country, often as an expert witness at hearings. His specialty was new towns and shopping centres, topics on which he lectured and wrote books. From 1973 to 1976, he was an adviser to the ministry of housing.

In 1968 he joined the faculty of the University and in 1975 became a professor of urban and regional planning. He retired in 1982 and was named professor emeritus the following year.

NELSON EARL, assistant director of the Department of Development and Department of Private Funding from 1972 to 1983 and board member of the T-Holders' Association, Sept. 3.

Born in 1917 in Montreal, Earl attended Victoria College from 1935 to 1939, graduating in political science and economics.

He was a prominent member of the swimming and water polo teams and won the Buckley Memorial Trophy and T.H. Bickle Award.

His lifelong interest in naval affairs started in his teens when he served as midshipman in Australia, along with Prince Philip, later Duke of Edinburgh.

He served for five years in the Royal Canadian Naval Volunteer Reserve during the Second World War, attaining the rank of lieutenant-commander, and was awarded the Distinguished Service Cross for his skill in detecting enemy submarines.

At the end of the war, he joined the Sun Life Assurance Company of Canada and, in 1972, the University's Department of Development as assistant director. In this capacity, he guided several funding projects affecting athletic facilities, including the Varsity Arena Fund.

He retired in 1983 but continued his support of the University by serving as a board member of the T-Holders' Association from 1980 to 1985.

MRC sets new research guidelines

Human subjects to have more protection

by Patrick Donohue

THE MEDICAL Research Council's new guidelines on research involving human subjects call for more stringent measures to protect the freedom and dignity of subjects, says a U of T professor who played an important part in the formation of the new guidelines.

Until now, universities have done very little monitoring to make sure that researchers adhere to the approved protocols when dealing with human subjects, says Professor Bernard Dickens, of the Faculty of Law, chair of the MRC's working group on the new guidelines. It has simply been assumed that department heads would make sure that research involving human subjects is carried out ethically.

However, the new guidelines stipulate that, at minimum, researchers must report annually on the status of their work to the ethical review boards in their institutions. The guidelines replace those that have been in place since 1978.

The boards must be particularly vigilant to ensure free and informed consent of subjects. It must also be made clear that it is research being done, not therapy. Confusion on that point often arises among patients in institutions, says Dickens. They tend to think that anything being done by medical personnel is for the patients' own good and must therefore be therapeutic.

In research, the reverse is the case. "It's something you are doing for us, not something we're doing for you." So important is that distinction that, in several research facilities in the US, patients are given detailed information about the research to be performed and, before the experiment starts, are examined on their understanding of the situation. If their answers show that they think the research is actually therapy, they are ruled ineligible for the experiment.

"Assent" vs "consent"

The new guidelines also tighten the restrictions on research involving children and adults who may be incompetent. The notion of "assent" as distinct from "consent" is introduced. If a child indicates a refusal of assent to taking part in a certain experiment, the researcher must, from the point of view of ethics, respect that wish — even though the child's parent or guardian could give legal consent to the experiment. The same applies to adults who are incompetent to give consent. If they indicate that they do not wish to be subjected to some procedure — such as lumbar tap — that must be taken as the final answer.

In spite of the increasing emphasis on protection of human subjects involved in research, the MRC doesn't call for any new law on the subject. Because legislation is hard to pass and even harder to change, it doesn't offer the opportunities for "fine-tuning" that guidelines do, says Dickens.

JEWEL RANDOLPH

Bernard Dickens

He recognizes that the reliance on guidelines rather than law could result in a situation in which an experiment that might be allowed in one hospital could be forbidden in a neighbouring hospital. Dickens believes that such differences in applications of the guidelines might be entirely appropriate.

Fine-tuning

The only effective legislation would be of a kind that required the approval of ethical review boards. "But we have that situation now so why do we need the legislation?" Admittedly, the sanctions are financial rather than legal: the MRC can cut off funding of researchers who don't comply with the guidelines.

As an example of the kind of fine-tuning possible with guidelines, Dickens cites research on embryos. While acknowledging that no consensus is currently possible on such a controversial subject, the guidelines stipulate that no embryos should be created in-vitro for research purposes. Embryos left over from in-vitro fertilization processes may be used for research on infertility but the research should not be carried out beyond the 17th day of the embryo's life.

However, the guidelines say that in order to study the failures of embryos to implant — a process which doesn't take place until after 14 days — it may ultimately be advisable to extend the time limit on embryo research. As social values and science develop, ethics review boards might also permit embryo research for such purposes as genetic correction.

The MRC notes in the new guidelines that several techniques of genetic engineering are now possible. Given the present state of knowledge of the subject, the council allows human genetic engineering only in cases where there is no reason to believe genetic alterations will be inherited.

Although gene engineering and research involving embryos often become subjects of heated debate, the working group had a more "agonizing" disagreement, says Dickens, on a quite different ethical dilemma: deception. The experts were divided on the subject of whether or not any deception whatsoever should be allowed — for instance in psychological research. Ultimately the MRC imposed very strict limits on such deception.

By acknowledging, though, that deception is admissible in some cases, the MRC introduced some of the values of the social sciences into its guidelines. This reflects the knowledge that the MRC guidelines are often used by other groups for which the council isn't directly responsible. While the MRC must be careful not to appear to be committing "ethical imperialism," the fact is that many other disciplines look to the MRC's guidelines for ethical standards, says Dickens. That's why the MRC made a point of including a social scientist on the working group on the guidelines.

But U of T's guidelines, established in 1979, had already reflected the considerations of the social sciences, says Dickens, who has just been appointed chair of the University's committee on the use of human subjects. Indeed, many other universities have based their own guidelines on U of T's.

Dickens sounds a warning note, however, about guidelines in general. It's the responsibility of individuals to make sure that the guidelines are observed. As chilling example of the failure to do so, Dickens points to the fact that, in 1931, well before the Nazi atrocities which were perpetrated in the name of medical research, Germany's Ministry of the Interior had issued scrupulous ethical guidelines on experimentation. "Guidelines themselves don't guarantee anything."

1988 Gairdner Foundation International Awards Lectures

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THURSDAY, OCTOBER 20, 1988 — Chairman: J. Wang, Ph.D.

12:00 noon — **Welcoming remarks**
C.H. Hollenberg, M.D., President, Gairdner Foundation
J.H. Dirks, M.D., Dean, Faculty of Medicine, University of Toronto

12:10 p.m. — **Inositol phosphates and calcium signalling**
MICHAEL J. BERRIDGE, Ph.D.
University of Cambridge, England

12:40 p.m. — **The role of the protein kinase C family in signal transduction**
YASUTOMI NISHIZUKA, M.D., Ph.D.
Kobe University School of Medicine, Japan

1:10 p.m. — **The adrenergic receptors**
ROBERT J. LEFKOWITZ, M.D.
Duke University Medical Center, Durham

FRIDAY, OCTOBER 21, 1988 — Chairman: M. Smith, Ph.D.

12:00 noon — **RNA as an enzyme**
THOMAS R. CECH, Ph.D.
University of Colorado, Boulder

12:30 p.m. — **The vaccine control of Epstein-Barr virus-induced cancers**
MICHAEL A. EPSTEIN, M.D., Ph.D.
University of Oxford, England

1:00 p.m. — **A capacity for regeneration in the adult mammalian central nervous system**
ALBERT J. AGUAYO, M.D.
McGill University, Montreal

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The Gairdner Foundation was formed in 1957 by the late James A. Gairdner and his family in Toronto. Each year, Gairdner Foundation International Awards are given to a small number of scientists in recognition of their contributions to medicine.

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For women in science, progress is slow

"Chilly climate" discourages students

by Jane Stirling

DESPITE RECENT EFFORTS to attract more women to science and engineering programs at Ontario universities, the future does not look bright, says Rose Sheinin, a professor of microbiology and vice-dean of the School of Graduate Studies.

Calling the university scientific environment "unfriendly and unwelcoming" to young women, Sheinin said she does not blame those who choose other fields.

While she supports the recommendations of a recent report by the Council of Ontario Universities (COU) on attracting women to science and engineering, Sheinin said she would like to see immediate action to improve the situation, "not action 10 years from now."

"The climate for women scientists hasn't changed since I was a student [in the 1940s]," she said. "There is, if anything, a diminishing number of female faculty."

Sheinin said today's established scientists and engineers must hire more women. "It is their responsibility to make our society gender-equal. They select who will be welcomed into their circles and they conduct the hiring searches."

Many young women entering university are aware of a gender-biased environment in the sciences and engineering, she said. "They see a wall-to-wall carpet of men. So they look instead to where there are women and where they'll have someone to listen to them.

"Women have a lot of wonderful role models but they just aren't recognized by men," she added. "There's still a tremendous resistance on the part of men and some women on sharing the workplace. Women are performing in the sciences. It's society that isn't behaving well."

Number low

The COU report, written by the council's status of women committee, says that the number of women remains "conspicuously low" in traditionally male disciplines such as engineering, applied science and mathematics.

More than half the students who graduate from Ontario universities are women, the report notes, but only 12.3 percent of engineering and applied science undergraduates are female, up from 5.9 percent a decade earlier.

The number of women in these fields studying for their masters degrees is 12.5 percent, up from 4.3 percent 10 years ago; at the doctoral level, women make up 7.6 percent of their class, compared to 5.6 percent in 1975.

The 25-page report identifies a variety of causes of the problem, such as a "chilly campus climate," lack of female role models and lack of appropriate classroom materials.

"Sexist attitudes and behaviors which demean and devalue women or create an atmosphere of indifference persist at the university in blatant and subtle forms in the classroom, at orientations, in campus newspapers."

The report makes recommendations ranging from better outreach programs and support systems to financial awards and an unbiased curriculum.

One of the most important ways of increasing female representation in non-traditional university studies "is to display those fields as feasible, rewarding and receptive to women," the report says.

Susan Mann Trofimenkoff, vice-rector of the University of Ottawa and chair of COU's status of women committee, said this image of the science and engineering programs as "male bastions" must change.

Career days, workshops and conferences emphasizing sciences for female elementary and secondary students have received "enthusiastic responses," says Sally Cumming, the University's manager of student services.

Last February, she organized a conference for female math and science students at the elementary and secondary school levels. The lectures and tours were designed to make young women more aware of the engineering and science fields at the post-secondary level.

Alan Hill, associate director admissions in charge of high school liaison, said the University is placing greater stress on its program to encourage women to enter predominantly male faculties.

However, women should be encouraged at an early stage to enter non-traditional professions, he said. The primary grades are the place for this socialization to begin.

"Often, by the time we see these young women, the damage has been done," Hill said. "It's like closing the gate after the horse has bolted."

This year, for the first time, the federal government is offering admissions scholarships for science and engineering students — with the provision that 50 percent of the candidates be female. "One of the objectives of this program is to get more women to enter the sciences," said Carol Swift, director of student awards.

Two hundred and twenty students with these scholarships entered U of T this September and slightly more than 50 percent were female, Swift said.

GREG HOLMAN

Rose Sheinin

Researcher studies Great Lakes plankton

PROFESSOR Gary Sprules, of Erindale College and the Department of Zoology, has received a three-year, $175,000 grant from the Donner Canadian Foundation to study the size of plankton in the Great Lakes as an index of the general health of lake life.

"There is evidence that size distribution changes with contamination," Sprules said.

His test does not make use of species identification, the traditional monitoring method. While his approach may not prove as accurate as those now in use, he hopes it will be sensitive enough to be accepted as supplemental.

If plankton of one size disappear, the next step in the ecological ladder suffers. "The beauty of the method is that it is quick and the equipment we need is available," Sprules said.

He will use the traditional measures of lake health to measure the accuracy of his research.

At the end of the three-year research period, Sprules plans to publish a practical handbook describing the plankton test.

Centre names advisory board

THE CENTRE for Plant Biotechnology has named a nine-member advisory board to help generate new research initiatives and funding.

The board members are Wolfgang Baier, director of Agriculture Canada's plant research centre; Carole Gillin, director of the University's Office of Research Administration; Robert Hirons, a patents expert with the Toronto law firm McCarthy and McCarthy; Ross Lawford, general manager of Diversified Research Laboratories Ltd. and a member of the national biotechnology advisory committee; lawyer Conor McCourt, also with McCarthy and McCarthy; Jean Claude Mercier, associate deputy minister of forestry with the Canadian Forestry Service; Vern Seligy, head of the National Research Council's medical genetics section; and Hank Vander Pol, chair of the Agriculture Research Institute of Ontario and president of Ro-land Farms Ltd. of Blenheim, Ont.

Professor Paul Horgen of Erindale College and the Department of Botany directs the centre and chairs the advisory board.

The board members represent the agricultural, forestry and food industries, as well as the national scientific community.

The Centre for Plant Biotechnology was founded in 1985 by Professor John Williams, former chair of the Department of Botany, to encourage the application of new techniques in genetic engineering to the study of plant biology.

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Koffler Mall 12 noon - 1:30 p.m.

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On the lookout for a neutron star

Observers search for pulsar in Supernova Shelton

by Karina Dahlin

SUPERNOVA SHELTON is a source of intense interest to astronomers around the world, but so far no one has found a pulsar at the centre of the exploded star.

"We've seen pulsars here and there and we've seen remnants of supernovas in other places. We have deduced they belong together. Now we have a chance to prove it. This will probably be the only chance in our lifetime," says Professor Robert Garrison of the Department of Astronomy, associate director of the David Dunlap Institute.

Every week, for two hours, U of T observers at Las Campanas, Chile, look for signs of the pulsar, a rotating neutron star, in the supernova identified by Ian Shelton 18 months ago. They would like to confirm the theory that pulsars and supernovas are results of the same process.

If astronomers do not find a pulsar in the coming years, they will have to revise their theories of how supernovas develop in the first few seconds. The current hypothesis suggests that the core of a precursor star collapses into a neutron star weighing about one tonne per tablespoon, so dense it emits light only at its poles.

In the compression of the star, the original atoms are crushed and become neutrons.

The absence of a pulsar would suggest the complete disintegration of the precursor, leaving only a dust cloud. "But we're pretty confident the pulsar is there," Garrison says.

The shell of the original star was blown off during the explosion and is expanding rapidly, at the speed of one earth diameter per second. It is not a uniform sheet, but "more like a glob," Garrison said.

Observers hope to find a crack in the uneven cover of the expanding shell through which to detect radiation from the pulsar.

Supernova Shelton is found in the Large Magellanic Cloud, a galaxy 163,000 light years away. Observers have recorded a great deal of useful data — showing, for example, that the supernova has begun to follow the decay pattern of radioactive cobalt and nickel — but the search for a pulsar is the most compelling part of the work.

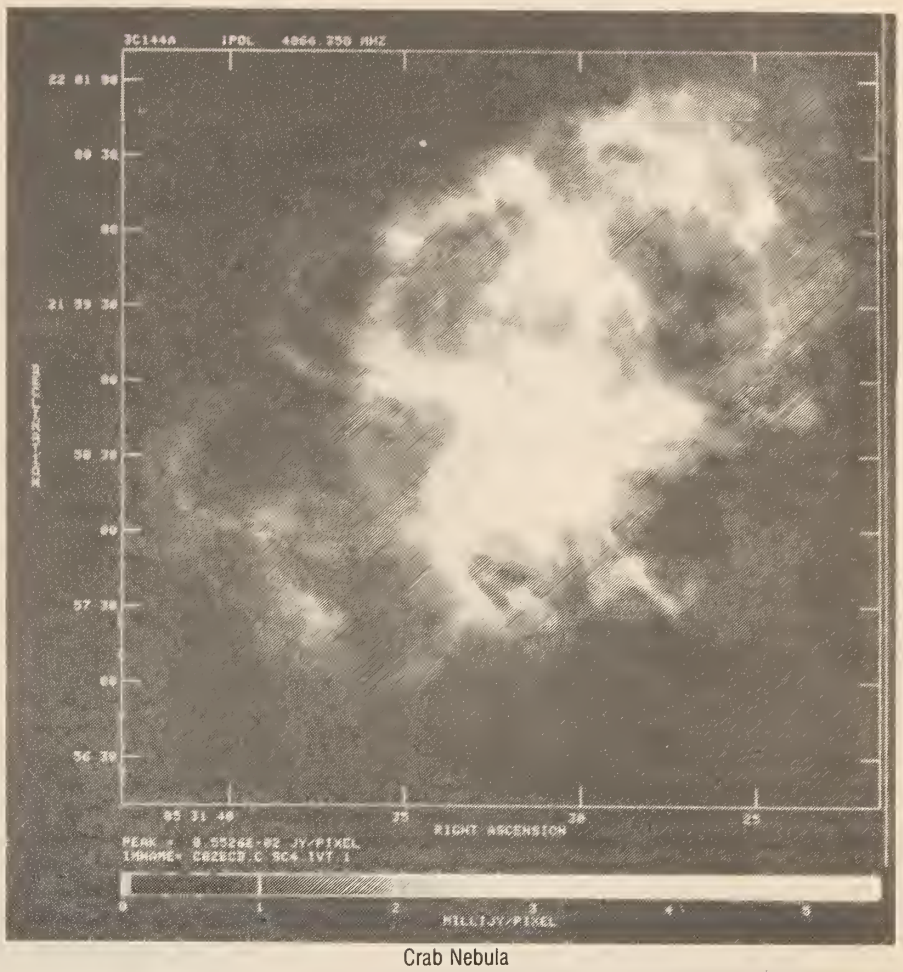
Meanwhile, University astronomers are excited about a development concerning the remnants of an older supernova.

Professor Philipp Kronberg, also of astronomy, this month received the most detailed image ever of the Crab Nebula, a dust cloud formed 930 years ago in a galaxy 6,500 light years away.

To get the picture, U of T graduate student Michael Bietenholz gathered data from 27 satellite dishes of the Very Large Array (VLA) radio telescope at the US National Radio Astronomy Observatory in Socorro, New Mexico. The information was then processed by the University's supercomputer, which produced the photo.

In 930 years, Supernova Shelton will resemble the Crab Nebula of today, Garrison says. But a similar image cannot yet be made because the new supernova is still too small.

The discovery of Shelton was to have been marked by an international conference later this year. However, due to lack of funding and the loss of the key organizer, the event has been cancelled. Marshall McCall, formerly a research fellow, left U of T this fall for a teaching position at York University.



Crab Nebula

New choir formed at U of T

A NEW CHOIR has been formed at the University for anyone who can sing — faculty, administrative staff, students and those outside the community.

Doreen Rao, director of U of T's choral program, hopes the University Symphony Chorus will attract hundreds of participants. You don't have to be a future star of the Metropolitan Opera, Rao says — some previous choir experience and a desire to sing are enough.

The first rehearsal was held Sept. 20 at the Faculty of Music. Members will be accepted through Sept. 27. A minimum of 120 voices are needed for the first performance Dec. 7 at the MacMillan Theatre, featuring *Une Cantate de Noel* by French composer Arthur Honegger.

The second concert, songs and serenades, is scheduled for March 31 and will include Vaughan Williams' *Serenade to Music*.

Rao calls the chorus an "outreach program" to strengthen the ties between the Faculty of Music and the public.

It is also an opportunity for music teachers at the elementary and secondary school levels to improve their voices and skills. Talented fourth-year high school students will be admitted.

Rao has auditioned dozens of potential members, among them a restaurant owner, a cook and other representatives of the business community. Rehearsals are held weekly on Tuesdays from 7 to 9 p.m. Rao also directs the University College Concert Choir.

She joined the University this term after 15 years as director of the Glen Ellyn Children's Chorus of Chicago. The chorus participated in four Grammy Award-winning recordings with the Chicago Symphony between 1982 and 1986. Rao was assistant conductor of the Chicago Symphony Chorus and a singer for 18 years.

For information on the new choir call 978-3733.

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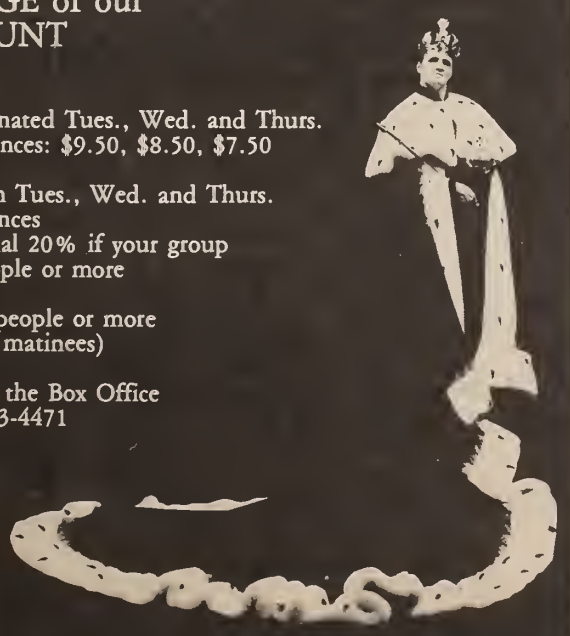
Colm Feore as Richard III
Photo: Michael Cooper

UTFA annual meeting

The annual meeting of the
University of Toronto Faculty Association
will be held on
Thursday, September 29, 1989 from 4 to 6 p.m.
in the auditorium of the
Medical Sciences Building (Room 3153).

Books

September
The Lyre of Orpheus, by Robertson Davies (Macmillan of Canada; 472 pages; $25.95). The final volume of the trilogy including *The Rebel Angels* and *What's Bred in the Bone.*

Watermills of Ontario, Quebec and Maritime Canada, by W. Stephen Cooper, text by Cooper* and Carol Shibuya (McGraw-Hill Ryerson; 148 pages; $39.95). Photographic profiles of 67 Canadian water-powered mills, including historical, architectural and anecdotal information. Illustrated with 110 black-and-white and 62 colour photographs.

Taras Shevchenko: A Life, by Pavlo Zaitsev, translated by George S.N. Luckyj* (University of Toronto Press; 284 pages; $35). The first translation into English of Zaitsev's biography of the Ukraine's greatest poet. Written in the 1930s, the book was published 1955.

Upper Canadian Imprints, 1801-1841: A Bibliography, by Patricia Lockhart Fleming (University of Toronto Press; 556 pages; $125). An analytical bibliography of books, pamphlets, government publications, serials, broadsides and other ephemera. Historical notes deal with authorship, printing, publishing, distribution and sales, the content of important works and the relationship between items.

August
Hellenistic Philosophy: Introductory Readings, edited and translated by Brad Inwood and Lloyd Gerson (Hackett Publishing Co.; 266 pages; $6.95 US). Translations of the Stoics, Epicureans and Sceptics. The texts are selected to demonstrate the philosophical discussions among the schools.

Calculus on Heisenberg Manifolds, by Richard Beals and Peter Greiner* (Princeton University Press; 200 pages; $40 US cloth, $15.95 US paper). Develops a full asymptotic calculus adapted to certain second order operators which are hypoelliptic but not elliptic.

Catching up
Hello Out There! Canada's new music in the world, 1950-85, edited by John Beckwith* and Dorith R. Cooper (CanMus Documents 2, Institute for Canadian Music; 197 pages; $15). Proceedings of a November 1986 conference organized by the Faculty of Music's Institute for Canadian Music.

The Lyre of Orpheus, by Robertson Davies, was published in September.

The Everyday World as Problematic: A Feminist Sociology, by Dorothy Smith (University of Toronto Press; 244 pages; $14.95). Essays examining the structure of the everyday world from the perspectives of feminist theory, Marxism and phenomenology.

Permissible Computing in Education: Values, Assumptions, and Needs, by Ronald G. Ragsdale (Praeger Publishers; 295 pages; $39.95 US). Investigates the relationship between computer applications and current assumptions about computers. Recommendations are made for future computer applications in educational settings.

Teachers as Curriculum Planners: Narratives of Experience, by F. Michael Connelly* and Jean Clandinin (OISE Press and Teachers College Press; 230 pages; $15.50). On becoming and being a teacher; excerpts from teachers' life histories.

The Holistic Curriculum, by John P. Miller (OISE Press; 140 pages; $22.75). Explores connections between logic and intuition, students and community and subjects in the curriculum. Holistic education attempts to develop the whole child through a sense of connectedness with self and with others.

Making a Difference Through Performance Appraisal, edited by Edward S. Hickcox, Steven B. Lawton, Kenneth A. Leithwood and Donald F. Musella (OISE Press; 202 pages; $18.50). Examines major issues in performance appraisal in schools. Discussions deal with problems of policy development and the evaluation of the appraisal process.

Fascism and Resistance in Portugal: Communists, Liberals and Military Dissidents in the Opposition to Salazar, 1941-1974, by D.L. Raby (Manchester University Press; 304 pages; $49.95 US). The nature, strengths and limitations of the Portuguese resistance to half a century of dictatorship.

Business Strategies and Free Trade: Focus on Adjustment, edited by Maureen Farrow and Alan M. Rugman* (C.D. Howe Institute; 106 pages; $10). Papers from a recent conference organized by the Faculty of Management and the C.D. Howe Institute. Contributors use concepts of strategic management to suggest ways in which Canadian corporations can adapt to global trade and investment in the context of the Canada-US free trade agreement.

U of T staff are indicated by an asterisk when there is multiple authorship or editorship which includes non-U of T staff.

PURCHASING

The Network version of LOTUS 1-2-3 is now available from Purchasing. Contact **Mike Voelker** for further information and pricing.

Just a reminder that maintenance contracts have been arranged for P.C.s and Printers. Contact **Mike Voelker** at **978-2352** for further details and price information.

Departments wishing to come on line with the Purchasing/Accounts Payable system during the Fall and Winter can call **Linda Nevison** at **978-8292** to make arrangements for the documentation and to set appointments.

Interested in a FAX machine? Contact **Steve Richards** at **978-7025** for complete details and a copy of the updated spreadsheet.

We are presently investigating setting up a group service contract for **Electronic** typewriters similar to that for **Electric** typewriters. If interested, send quantity, makes and models of machines to Purchasing Dept., attn.: Linda Nevison.

TRAVEL PROGRAM

The Preferred Agencies will gladly accept your bookings without using the University Travel Card, but using it is a fine and simple method of expense control. If you do not have a card yet, contact **George Mammoliti** at **978-5173** for your application.

The Preferred Agencies also have special rates on auto rentals and hotel bookings, which they will gladly reveal to you upon request, or call **George Mammoliti** at **978-5173** for rates at specific hotels in specific cities.

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The "Equipment Exchange" is a service co-ordinated by the Purchasing Department to facilitate the recycling of surplus equipment within the University.

PLEASE NOTE: Equipment moved from research to administration or sold outside the University is subject to tax and duty. Contact Customs, commodity taxation section if unsure.

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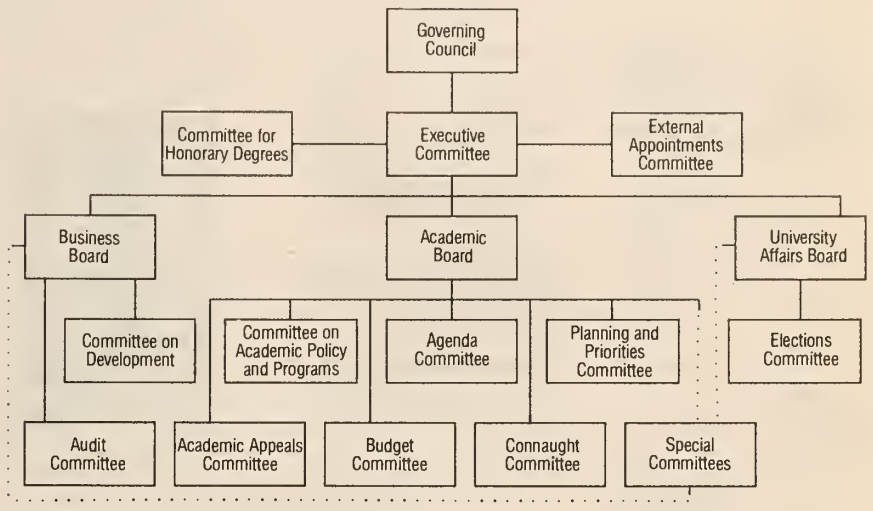

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*Glen Jones
Ricard Mashregi, full-time undergraduate student, Scarborough College
John Nestor, full-time undergraduate student, Fac. of Applied Science & Engineering
Darlene Robinson, part-time undergraduate student, Woodsworth College
and one part-time undergraduate student to be announced

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*Prof. C. Claude Brodeur
Principal John W. Browne, Innis College
*Prof. G. Israelstam

Events

Lectures

Humanism and Science in Rudolphine Prague: Kepler in Context.
Tuesday, September 27
Prof. Anthony Grafton, Princeton University. Senior Common Room, Burwash Hall, Victoria College. 5 p.m. (Renaissance & Reformation Colloquium)

From Research Project to System of Care: The Development of Mental Health Services in New South Wales.
Wednesday, October 5
John Hoult, regional consultant of mental health, New South Wales. Main Auditorium, Clarke Institute of Psychiatry. 12 noon. (Psychiatry)

The Space of Appearance.
Wednesday, October 5
Prof. George Baird, Faculty of Architecture & Landscape Architecture. Auditorium, Medical Sciences Building. 7 p.m.
(Architecture & Landscape Architecture)

Learning to Make the Diagnosis: A Memory for Cases or a Case for Memory.
Thursday, October 6
Prof. Janet Gale-Grant, Open University, England; Rosenstadt lecture series. 2172 Medical Sciences Building. 4 p.m.
(Faculty of Medicine)

Colloquia

Firearms in Sixteen-Century Field Warfare: A Re-evaluation.
Tuesday, September 27
Prof. Bert S. Hall, Institute for the History & Philosophy of Science & Technology. 323 Victoria College. 3.30 p.m. (IHPST)

Acceptance versus Belief.
Tuesday, September 27
Prof. Jonathan Cohen, University of Oxford. Senior Common Room, Burwash Hall, Victoria College. 5.30 p.m.
(IHPST and Reformation & Renaissance Studies)

Where Is the Spin of the Proton: Polarized Electroproduction and the EMC Effect.
Thursday, September 29
Prof. Frank Close, University of Tennessee. 102 McLennan Physical Laboratories. 4.10 p.m.
(Physics)

The Naked Sugars and the Synthesis of Natural Products.
Wednesday, October 5
Prof. Pierre Vogel, Université de Lausanne. 428 Lash Miller Chemical Laboratories. 3.30 p.m. (Chemistry and Carbohydrate Research Centre)

Active Galactic Nuclei.
Thursday, October 6
Prof. Philip Morrison, Massachusetts Institute of Technology. 102 McLennan Physical Laboratories. 4.10 p.m.
(Physics)

William Rufus: Terror of the Church.
Thursday, October 6
Prof. C. Warren Hollister, University of California at Santa Barbara; Bertie Wilkinson Memorial Lecture. Senate Chamber, Alumni Hall, St. Michael's College, 121 St. Joseph St. 4.10 p.m. (Medieval Studies)

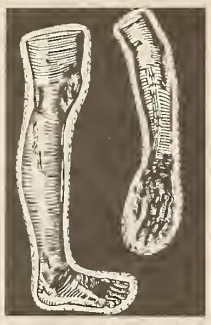
Achieving Health for All.
Thursday, October 6
Dr. Maureen Law, deputy minister, national health and welfare. Auditorium, Medical Sciences Building. 4.30 p.m. (Health Administration)

Emerging Neurochemical Theories of Alcoholism.
Tuesday, October 11
Prof. Robert Myers, East Carolina University, North Carolina. Main Auditorium, Clarke Institute of Psychiatry. 12 noon. (Psychiatry)

Exhibitions

ROBARTS LIBRARY

Lithuanian Folk Art.
To September 29
A display of national costumes, textiles, dolls, ceramics, woodwork and Easter eggs; organized by the Lithuanian Folk Art Institute. Main Display Area. Hours: Monday to Thursday, 8.30 a.m. to 11 p.m.; Friday, 8.30 a.m. to 6 p.m.; Saturday, 9 a.m. to 5 p.m.; Sunday, 1 to 10 p.m.


From *Second Nature* exhibition at Scarborough College.

JUSTINA M. BARNICKE GALLERY, HART HOUSE

The Tata Era: Fifty Years of Photography.
To October 6
Organized and circulated by the Canadian Museum of Contemporary Photography. Both galleries.
Gallery Hours: Tuesday to Thursday, 11 a.m. to 9 p.m.; Friday and Saturday, 11 a.m. to 6 p.m.; Sunday, 2 to 5 p.m.

FACULTY OF ARCHITECTURE & LANDSCAPE ARCHITECTURE

Nouvelles directions de l'architecture moderne.
To October 6
Recent developments of modern architecture in Europe and America, curated by Kenneth Frampton and Michel Kagan.

Patkau Architects.
October 4 to October 27
Work of Vancouver architects, John and Patricia Patkau, including the winning design for the Waterloo Glass and Clay Museum. The Galleries, 230 College St. Gallery hours: Monday to Friday, 9 a.m. to 5 p.m.

FISHER RARE BOOK LIBRARY

Terra Australis Incognita.
To October 7
An exhibition of books, maps and prints about Australia to 1900. 2nd floor.
Hours: Monday to Friday, 9 a.m. to 5 p.m.

SCARBOROUGH COLLEGE

Second Nature.
To October 7
Work of Jeannie Thib. The Gallery.
Gallery hours: Monday to Friday, 11 a.m. to 4 p.m.

VICTORIA COLLEGE

Paintings and Drawings.
September 26 to October 14
Paintings and drawings by Ann Glanville Darbyshire. 1st floor, Northrop Frye Hall. Hours: Monday to Friday, 9 a.m. to 6 p.m.

Music

Thursday Noon Series.
Thursday, September 29
Leslie Robertson, viola.

Thursday, October 6
Masters of the Performing Arts: Maureen Forester and Big and the Blues: Clarence "Big" Miller; films. Walter Hall. 12.10 p.m.

Film

Innis Fall Film Program.
Thursday, September 29
The Compilation Film; including works by Bruce Conner, Arthur Lipsett, Al Razutis and David Rimmer.

Thursday, October 6
Discussion; critical debate on the "compilation film." Innis College Town Hall. 7 p.m.

Information: 588-8940 or 978-7790.

Miscellany

Memorial Service for John W. Holmes.
Tuesday, September 27
Friends, colleagues and former students welcome to attend. Auditorium, Medical Sciences Building. 4 p.m.

Free Trade Debate.
Tuesday, September 27
Prof. John Crispo, Faculty of Management vs. Bob Rae, leader, Ontario NDP. George Ignatieff Theatre, Devonshire Place. 7 to 9 p.m. (Management, PC Blue Club and U of T PCs)

David Dunlap Observatory Saturday Evening Tour.
Saturday, October 1
Tour includes a slide presentation and, weather permitting, a demonstration of the 74-inch telescope in operation. David Dunlap Observatory, 123 Hillsview Drive, Richmond Hill.
Reservations required. Call 884-2112 weekdays, 9.30 a.m. to 4.30 p.m.

Woodsworth Annual Book Sale.
Friday, October 7 and Saturday, October 8
Drill Hall, 117 St. George St. (behind Woodsworth College). Friday, 11 a.m. to 8 p.m.; Saturday, 10 a.m. to 4 p.m.
Admission $1 Friday, Oct. 7.

Seminars

Retraining Cognitive Skills in the Elderly.
Tuesday, September 27
Paul Baltes, Max Plank Institute, Berlin. Room 204B, 455 Spadina Ave. 10 a.m. to 12 noon.
(Gerontology)

Insulin Receptor Transmembrane Signalling.
Tuesday, September 27
Dr. Ira Goldfine, Mount Zion Hospital Medical Centre, San Francisco. Room 814, 3rd floor, Charlie Conacher Research Wing, Toronto General Hospital. 5 p.m.
(Banting & Best Diabetes Centre)

Influence of Religion on Mathematics.
Tuesday, September 27
Prof. Jan de Koning, Department of Mathematics. South Sitting Room, Hart House. 7.30 p.m.
(Canadian Scientific & Christian Affiliation)

Prostaglandin H-Synthase Dependent Activation of Carcinogenic Aromatic Amines.
Wednesday, September 28
Prof. P.D. Josephy, University of Guelph. 2172 Medical Sciences Building. 4 p.m.
(Pathology)

PDLC Films: Novel Materials for Electro-optics and Nonlinear Optics.
Tuesday, October 4
Prof. Peter Palffy-Muhoray, Kent State University. 134 McLennan Physical Laboratories. 4 p.m.
(Ontario Laser & Lightwave Research Centre)

Insulin Effect on Hepatic Lipoprotein Synthesis and Secretion.
Tuesday, October 4
Prof. John Amatruda, University of Rochester Medical School. Room 814, 3rd floor, Charlie Conacher Research Wing, Toronto General Hospital. 5 p.m.
(Banting & Best Diabetes Centre)

The Optimization Based Nurse Scheduling System for Microcomputers.
Wednesday, October 5
Prof. Michael M. Kostreva, Clemson University, South Carolina. 211 Rosebrugh Building. 3 p.m.
(Industrial Engineering)

Knowledge Based Scheduling.
Thursday, October 6
Prof. Mark Fox, Carnegie Mellon University, Pittsburgh. 310 Rosebrugh Building. 3 p.m.
(Industrial Engineering)

The Use of ZnO Thin-Films with Optical Fibres and Waveguides for Acusto-Optic Interactions.
Tuesday, October 11
Fred S. Hickernell, Motorola Inc., Arizona. 134 McLennan Physical Laboratories. 4 p.m.
(Ontario Laser & Lightwave Research Centre)

Meetings & Conferences

Planning & Priorities Committee
Monday, September 26
Council Chamber, Simcoe Hall. 4 p.m.

Business Board.
Tuesday, September 27
Council Chamber, Simcoe Hall. 4 p.m.

Committee on Academic Policy & Programs.
Wednesday, October 5
Council Chamber, Simcoe Hall. 4 p.m.

Plays & Readings

David Fennario.
Wednesday, September 28
Playwright discusses his work, *Doctor Thomas Neill Cream*; UC playwrights series. UC Playhouse, 79A St. George St. 4 p.m.
(UC)

Events deadlines

Please note that information for Events listings must be received in writing at the *Bulletin* offices, 45 Willcocks St., by the following times:

Issue of October 11, for events taking place Oct. 11 to 24, *Monday, September 26*

Issue of October 24, for events taking place Oct. 24 to Nov 7, *Tuesday, October 11*

University of Toronto Computing Services

The Dest Scanner

The Dest Scanner at the UTCS Information Centre can do more than just scan text (as the two pictures and U ot T crest on the right indicate). Many desktop publishing packages (like *PageMaker* and *Ventura* on the PC and *PageMaker, Ready, Set, Go,* and *Quark Xpress* on the Macintosh) can manipulate photographs or line art scanned by the Dest Scanner. If you *want* to scan type-written text you can have it go directly into *WordPerfect*, Microsoft *Word, MultiMate*, and several other packages on the PC or create *MacWrite* or Microsoft *Word* documents on the Macintosh). Output can be directed to a laser printer (for proof copy) or to our Linotronic typesetter for camera-ready copy.

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We'll give you a free copy of the U of T crest in TIFF or Encapsulated PostScript format (for both Macintoshs and PCs). Contact Terry Jones, 978-4924.

Research Notices

For further information and application forms for any of the following agencies, please contact ORA at 978-2163.

American Health Assistance Foundation
The foundation offers support for Alzheimer's Disease, coronary heart disease research, and national glaucoma research. Grants are awarded on the basis of scientific merit, relevance of proposed research to the program, and qualifications and training of the researcher(s). Alzheimer's Disease grants are for one year (renewable) with a limit of $100,000; coronary heart disease and glaucoma research are for one year (renewable) with a limit of $25,000. Further details and application forms are available from ORA.

Deadlines are *October 30* for Alzheimer's Disease research and *November 30* for coronary heart disease and glaucoma research.

Canadian Liver Foundation
Establishment grants are offered for hepatologists or basic scientists to begin a liver research program in a Canadian university. The two-year award is designed to give the investigator the opportunity to obtain independent research results and basis for applications to the major federal agencies.

The foundation also offers fellowships designed to provide support for specialized clinical or experimental training in heptic function or disease.

Further details and application forms may be obtained from either the research office of the Faculty of Medicine or ORA. The deadline for both programs is *November 1*.

Canadian Lung Association
The association offers funds to promote research into any field of acute or chronic lung disease under several programs.

Canadian Nurses' Respiratory Society
Research may include clinical investigation of any nursing-related phenomenon pertinent to illness assessment, management or responses, or may be aimed at health promotion and prevention issues. Studies may use quantitative or qualitative methodologies.

Canadian Physiotherapy Cardio-Respiratory Society
Research may include clinical investigation, pathology, immunology, pulmonary physiology and function and the sociological aspects of disease and disease prevention. The physiotherapy section research grants are offered to physiotherapists pursuing investigations related to the management of patients with respiratory disease. Fellowships are offered to physiotherapists taking post-graduate training in which respiratory research is a major component. Ethics approval must accompany application documentation, for each program.

Application forms and further information on research project grants and fellowships may be obtained from ORA. Deadline for both programs is *November 1*. (Please note the **change** in deadline date for physiotherapy cardio-respiratory programs.)

Health & Welfare Canada
NHRDP will announce three new AIDS research funding opportunities as special competitions. These will include social services and AIDS, NHRDP/IDRC international AIDS research initiative, and a specific invitation to established researchers who now wish to include AIDS as a focus of their research program.

Proposals for research into AIDS will continue to be received by NHRDP on an ad hoc basis. Three review cycles per year have been established: *January 15, May 15* and *September 15*. Investigators are encouraged to express their initial interest through a letter of intent in order to ensure that any formal proposal submitted to the NHRDP will be consistent with the priorities of the Federal Centre for AIDS.

ORA will advise investigators of the application details and deadlines for the new NHRDP AIDS opportunities as soon as the information is available.

Medical Research Council
Investigators are reminded that the appropriate approval forms for use of human subjects (MRC 33), biohazards certification (MRC 34) and use of animals (MRC 35) must be completed and signed by the applicant before obtaining the institutional signature on behalf of the University from ORA.

National Alliance for Research on Schizophrenia & Depression
NARSAD offers support up to $30,000 annually for fellowship research training or to support a career as independent research faculty. Basic and clinical investigators are supported, but research must be relevant to schizophrenia, major affective disorders and other serious psychiatric disorders. Applicants must have a mentor or senior collaborator who is an established investigator in areas relevant to NARSAD.

Further information on the application format is available from either the research Office of the Faculty of Medicine or ORA. The deadline is *November 1*.

Ontario Ministry of Colleges & Universities
The university research incentive fund secretariat has advised ORA that it is unlikely revised guidelines and new application forms will be in hand by mid-September. Applications for the Oct. 17 competition will be accepted on the old application form which may be obtained from ORA. Investigators are reminded that the internal deadline is *October 7* at ORA.

Ontario Ministry of Natural Resources
ORA has been advised that the Nov. 15 deadline for submission of research proposals for the Ontario renewable resources research grants program will be extended.

The revised deadline will be announced by the ministry at a later date.

Sandoz Foundation for Gerontological Research
The foundation offers funding for research concerned with aging and the aging individual in the areas of biology, pharmacology, immunology, geriatrics, geriatric psychiatry (behavioural aspects) and geriatric internal medicine.

Further details and application forms may be obtained from ORA. Deadlines are *May 1* and *November 1*.

Stratton Foundation Inc.
The foundation offers awards to $30,000 per year for three years for research in hematology and other areas of medicine.

Details and application forms are available from either the research office of the Faculty of Medicine or ORA. U of T may nominate one candidate only. The internal deadline at the research office of the Faculty of Medicine is *November 4*.

Upcoming Deadline Dates

American Health Assistance Foundation — Alzheimer's Disease research grants: *October 30*; coronary heart and glaucoma research grants: *November 30*.

Arthritis Society — M.A. Ogryzlo fellowships (Canadian Rheumatism Association): *October 15*; research grants; manpower development; personnel awards; multi-centre, groups facilitation and group development (full application): *October 15*.

J.P. Bickell Foundation — research grants: for foundation deadline Dec. 1, internal deadline at ORA, *October 21*.

Canada Housing & Mortgage — research grants: *October 3*.

Canadian Cystic Fibrosis Foundation — research grants, studentships, fellowships: *October 1*.

Canadian Electrical Association — proposals: *September 29*.

Canadian Geriatric Research Society — research grants: *October 1*.

Canadian Liver Foundation — grants and fellowships: *November 1*.

Cancer Research Institute (US) — fellowships: *October 1*.

Canadian Lung Association, Canadian Nurses' Respiratory Society and Canadian Physiotherapy Cardio-Respiratory Society — research grants and fellowships: *November 1*.

Easter Seal Research Institute — research and personnel grants: *October 15*.

Anna Fuller Fund — research grants, fellowships: *October 1*.

Hannah Institute — publications program: *October 1*.

Health & Welfare Canada, National Welfare Division — research projects; senior welfare research fellowships; research group development: *October 15*; NHRDP/NWG — Alzheimer's Disease and other dementia (special competition): *October 21*.

Hospital for Sick Children Foundation — research grants; fellowships: *October 1*.

International Life Sciences — K. Morgareidge award nominations: *September 30*.

International Union against Cancer — E. Roosevelt international cancer fellowships: international fellowships: *October 1*.

Juvenile Diabetes International Foundation — career development awards; fellowships: *October 1*.

Kidney Foundation of Canada — fellowships (renewals only): *October 1*; research grants: *October 15*; new fellowship and nephrology scholarships: *November 1* (please note **changes**).

Malignant Hyperthermia Foundation — research grants: *October 15*.

March of Dimes (US) — basic research grants: *October 1*.

Medical Research Council — visiting scientists; international exchanges; medical education; history of health sciences; MRC groups (new and renewal full applications): *October 1*.

Ministry of Colleges & Universities — URIF — new competition deadlines: for ministry deadline Oct. 17, internal deadline at ORA, *October* (please note **change**), *January 15* and *May 31*.

Multiple Sclerosis Society of Canada — research grants; career development; fellowships; studentships: *October 1*.

National Alliance for Research on Schizophrenia & Depression — fellowships: *November 1*.

National Institutes of Health (US) — new research grants: *October 1*.

NSERC — major installation grants; concurrent infrastructure and major infrastructure: *October 1*; operating grants (new); international programs: *October 15*; conference grants; equipment and major equipment; infrastructure; operating (other than first-time applicants); scientific publication grants; university research fellowships: *November 1*.

Ontario Mental Health Foundation —research grants and major equipment: *September 30*; lottery research grants: *October 14*; special competition and small research grants: *October 31*; publication and conference grants, all personnel awards: *November 30*.

Physicians' Services Inc. Foundation — research grants: *October 14*.

Sandoz Foundation — research grants: *November 1*.

SSHRC, Fellowships Division — Jules and Gabreille Leger fellowship; Bora Laskin national fellowship in human rights research: *October 1*; Research Grants Division — standard research grants; major research grants: *October 15*; Research Communication and International Relations Division — aid to occasional scholarly conferences in Canada; travel grants for international representation (for travel occurring after April 15): *October 30*.

Stratton Foundation Inc. — research grants: *November 4*.

Thrasher Research Fund — research grants: *any time*.

U of T — I'Anson professorships: *September 30* (please note **change**); Humanities & Social Sciences Committee of the Research Board — grants-in-aid (to $750): *October 1*; research grants ($751-$3,500): *October 15*.

W. Garfield Weston Foundation — research grants: *early autumn*.

Whitehall Foundation Inc. (US) — grants-in-aid program: *October 1*.

PhD Orals

Graduate faculty please call the PhD oral examination office at 978-5258 for information regarding time and location for these listings.

Friday, September 30

Maryel Archambault, Department of French Language & Literature, "Rejean Ducharme et la contre-culture." Prof. B. Shek.

Walter Douglas Scott Hayhoe, Department of Education, "Computer Commmand Menus: Sorting and Categorization Experiments." Prof. M. Orme.

Victor Robert Kennedy, Department of English, "Thackeray's Visual Imagination." Prof. P. Morgan.

Judy Elizabeth Turner, Department of Education, "Transitional Objects and Maternal Role: A Qualitative Study of the Mother's Experience of her Relationship to her Child and the Child's Special Object." Prof. O. Weininger.

Monday, October 3

Kirk Alexander Denton, Department of East Asian Studies, "Chaos and Madness in Lu Ling's Fiction: The Role of Mind in Social Transformation." Prof. M. Dolezelova.

Selim Sarwar Hannan, Department of Geology, "An Experimental Study of Fracture Closure in Elastically and Non-Elastically Deformable Rocks." Prof. R.M. Stesky.

Kenneth John Mouré, Department of History, "As Good as Gold: French Monetary Management, 1928-1936." Profs. J. Cairns and S. Howson.

Ellen Kaori Shibuya, Department of Zoology, "Studies of Cytostatic Factors in Cytosols of Mature *Rana Pipiens* Eggs." Prof. Y. Masui.

Theodore Tzalalis, Department of Education, "The Changing Labour Market of University Graduates and the Utilization of Manpower Forecasting by Ontario's Universities and Government with Emphasis on Teachers." Prof. S. Lawton.

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SPANISH NIGHT

Friday, October 21, 1988
Reception 6:30 - 7:30 p.m.
Tapas will be served. A guitarist will lend atmosphere.
Buffet 7:30 - 10 p.m.

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Letters

Tenants, tents and trees

SEVERAL EVENTS in recent months have exposed University priorities which make me ashamed of being part of this community. First came the decision by two colleges to lease some of their land to developers. The result will (probably) be the building of a high-rise luxury hotel at the corner of Charles St. and St. Thomas St. on Victoria property, and a mixture of high- and low-rise condominiums along Bay St. on St. Michael's property. The colleges will be rewarded handsomely, and the future (wealthy) tenants and hotel clients will be charmed, I'm sure...but gone will be the green spaces, the trees, the tennis courts, the charming old houses and the student housing on Charles St. Some Victoria College students and alumni have voiced their disapproval, but where are the other voices? Why does the vision of a luxury hotel on Charles St. not nauseate more of us?

In addition, we witnessed an executive order by President Connell in the summer prohibiting tenting on U of T grounds, and the subsequent eviction of "illegal" tenters who were protesting some of the policies of the Economic Summit leaders and the use of Hart House for a Summit dinner. Our president's pronouncement was certainly understandable, given that his "world-class" institution was being wooed by the "world-class" politicians, but it was not conscionable. Why instead, for instance, was there no outcry over the outrageous sum of money (in the tens of thousands of dollars according to newspaper reports) spent on (temporarily) air conditioning Hart House for this dinner at a time when some classes are overcrowded, many of the faculty are underpayed, and (what is far more damning) people are going hungry on our streets. Do we not care about such matters, even to the extent of putting on our usual facade?

This summer also resulted in the violation of Philosopher's Walk, which included the destruction of century-old trees. Room is being made for the architects to expand the law and music faculties, we read in the press, and careful consideration was given to preserving the natural surroundings, President Connell recently informed us. Sure. Meanwhile, Philosopher's Walk has been forever mutilated, and what we can look forward to is the sterile equivalent of the ROM expansion on Bloor St. What's the matter with this place... is no space on this campus sacred?

Metro police made a concerted effort to rid the streets of prostitutes during the recent economic conference. This was a sad spectacle of misplaced energy, to be sure, but the irony of the situation is that U of T brazenly continued to display that "street" role by allowing the politicians and architects and developers to use it — to use us. All of this reminds me of a famous anecdote. To summarize: a man once asked a woman if she would sleep with him if he gave her a million dollars. After her affirmative, if hesitant, reply he asked if she would do it for five dollars. "What do you think I am?" she protested. "We've already determined that, dear," came the reply. "All we're haggling about now is the price."

Michel Desjardins
Department of Religious Studies

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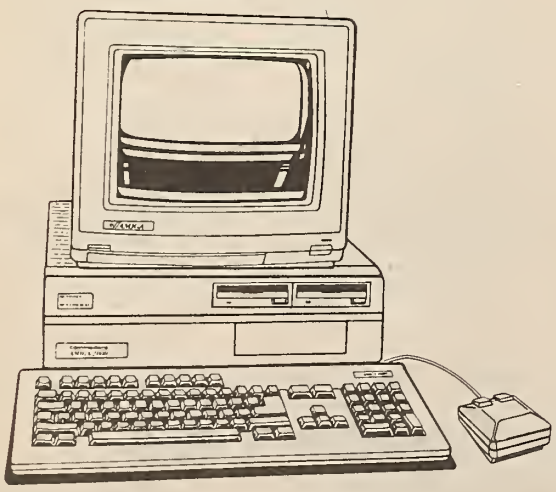

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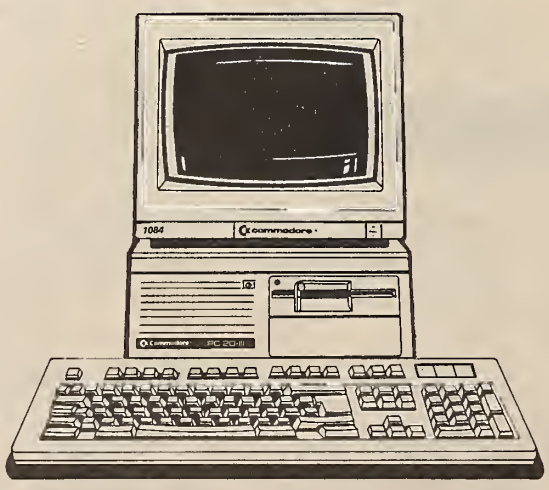

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Twisted elm

RUFUS CHURCHER certainly has a point ("Debarking up an old tree," *Bulletin*, Sept. 12), but one can't help wondering whether the difference is as major as he might lead us to believe. After all, cryptic crossword aficionados will have twigged to the fact that a lime is just one caught in a twisted elm!

Chris Johnson
Department of Communications

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Ads must be submitted in writing, 10 days before Bulletin publication date, to **Marion de Courcy-Ireland, Department of Communications, 45 Willcocks St., Toronto, Ontario M5S 1A1.** Ads will not be accepted over the phone.

Accommodation
Rentals Available — Metro & Area

Bloor-St. George area. Luxury studio apartments from approximately $850 per month. Could be partially furnished. Move-in condition. Sept. 15 onwards. Parking available. Phone 971-6094.

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High Park area — elegant, newly-decorated 2-bedroom flats, balcony, yard. $1,100 monthly, plus utilities. References. Evenings 635-5085.

Dundas-Shaw. Spectacular open space apartment in house on park. 1,500 sq. ft. on two levels. Lots of sun, designer renovation, parking, furnished. Available immediately 4-8 months $1,000. Phone 535-2615.

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Central, 4-5 bedroom, beautifully renovated, comfortable family home, available furnished from January 1, 1989, for 6-9 months (negotiable). 2½ bathrooms, 2 fireplaces, large garden. Walk to Bloor subway, 2 km. from campus. Rent negotiable. Call (416) 535-4031 or write Green, 262 Rusholme Rd. Toronto, Ontario M6H 2Y8.

Walk from U of T. Bloor/Bathurst, 1 BR, fireplace, air cond., dishwasher, garage negotiable. $930+. November. 530-1071 (mornings, evenings). 585-4407 messages.

Furnished. Christie/Bloor. Executive home, completely renovated, tastefully furnished. 3 bedrooms, living/dining room, solarium, deck, fireplace, skylights. Excellent move-in condition. $1,850 + utilities. 6 mos/1 year optional. November 1st or later. 535-4778. References required.

Annex apartment in large house,½ block N. of Albany/Bloor, and one block from Bathurst subway. Professor-owned, comfortable, 2-level, 2-BR, unfurnished, nicely renovated, fireplace, laundry in building, small (780 sq.ft.), $950/month plus hydro. Nov. 1. 538-3108.

Yonge-Sheppard. Newly completed, luxury condo, 1,450 sq.ft. 2 bedrooms + large sunroom, 2 baths, 5 appliances, air conditioning, parking, pool, gym, security. $1,450/month, inclusive. Call 449-3781 after 6 p.m. & weekends.

Riverdale sublet: Beautifully renovated row house, September 1989-April, 1990 (flexible). Furnished, two bedrooms, skylights, fireplace, fenced yard, deck, central air, excellent TTC service. Suitable for single/couple. $1,500/mo. + utilities. 736-5049.

Annex: Charming 1-bedroom, 1st floor of renovated house. Large pine kitchen, 6 appliances, garden, parking, pet O.K. $925 + utilities, November 1st. 929-5592 evenings.

Coxwell-Danforth area. One-bedroom apartment available November 1st. Upper level of semi-detached house. $775, including uitlities and parking. Call 465-4574 after 6.

Rosedale/Summerhill area. 4+-bedroom restored Victorian townhouse on historic street. Modern kitchen with walkout to beautifully landscaped garden. 481-7802.

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Accommodation
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Miscellaneous

PASSPORT PHOTOS. Located at TGH in rm. CCRW3-802 (3rd floor College St. entrance). Still $6.50 (Incl. tax) for 2 B/W Polaroid (Cash or Internal Billing only). 595-4084. **Wednesday 11-1** — no appointment necessary.

Licensed infant/toddlers daycare available. Lawrence/Yonge. Part-time negotiable. Call Sonia H. 860-1083, W. 481-8900.

Harmony Temporary Personnel Services requires dependable people for short and long-term positions. Exciting job opportunities are presently available. We have clerical/receptionist, secretarial, administrative, wordprocessing positions available. Interviews available after 5 p.m. Call Diane or Lori at 466-1100.

Victoria B.C. Real Estate. Experienced, knowledgeable realtor with university faculty references. Will answer all queries and send information about retirement or investment properties in Victoria. No cost or obligation. Call collect (604) 592-3666 or write Lois Dutton — Wessex Realty — 1516 Pandora, Victoria, B.C. V8R 1A8.

ACCENT NEED ADJUSTMENT? Communication enhancement workshops forming with "accent" on production and formation of the English sound system, English pronunciation and intonation patterns. Now in its fourth year. Over 500 satisfied graduates attest to its value. Groups of 6-8 participants. Personalized attention. Christine Gandy, B.A., Reg. OSLA Language/Speech Pathologist. 767-6691.

University librarian, 38, separated. Lively, artistic, attractive. Interests include theatre, films, cottage vacations, nature photography, crafts, gourmet cooking. Seeks compatible man for long-term relationship. P.O. Box 32, Fergus, Ontario N1M 2W7.

Physical-Occupational Therapy Alumni Association Annual General Meeting. October 12, 1988, at 7 p.m. in the Music Room at Hart House. 8 p.m. address by Dr. John Dirks, Dean of Medicine, U of T. Reception to follow.

Nanny, 25 years old, experienced, excellent references seeks position with 'special needs' child. Live out. Available Oct. 15th. Call Donna at 7-Eleven Domestic Agency. 925-2844.

Personnel Notices

Job Openings
Below is a partial listing of job openings at the University. The complete list is on staff bulletin boards. To apply for a position, submit a written application to the Human Resources Department. (1) Sylvia Holland; (2) Steve Dyce; (3) Varujan Gharakhanian; (4) Christine Marchese; (7) Sandra Winter; (8) Dagmar Mills; (9) Janice Draper; (10) Ross Milliken; (11) Jean Radley; (12) Julia Finerty.

Administrative Assistant I
($22,483 — 26,450 — 30,417)
Office of the Faculty Registrar (1)

Admissions and Programmer Officer
($28,664 — 33,722 — 38,780)
Graduate Studies (7)

Applications Programmer Analyst I
($22,483 — 26,450 —30,417)
Preventive Medicine & Biostatistics (1)

Applications Programmer Analyst II
($27,136 — 31,925 — 36,714)
Electrical Engineering (9), Graduate Studies (7)

Associate Faculty Registrar
($23,487 — 27,632 — 31,377)
Arts & Science, 60 percent full-time (4)

Audio Visual Technician I
($14,114 — 16,605 — 19,095)
Erindale, sessional appointment, salary prorated (7)

Building Services Officer II
($33,434 — 39,334 — 45,234)
Physical Plant (1)

Clerk III
($18,819 — 22,140 — 25,461)
Management (9), Physical Plant (1), Health Services (11), Preventive Medicine & Biostatistics (11)

Clerk Typist II
($17,340 — 20,400 — 23,460)
Preventive Medicine & Biostatistics (11)

Clerk Typist III
($18,819 — 22,140 — 25,461)
Preventive Medicine & Biostatistics (11), Chemical Engineering (9), Management (9), Geology (4), Office of the Faculty Registrar, Arts & Science (4), Continuing Education, Medicine (10), Social Work (11), Continuing Studies, 55 percent full-time (11), History, 50 percent full-time (4)

Craftsman III
($27,136 — 31,925 — 36,714)
Scarborough (7)

Engineering Technologist III
($28,664 — 33,722 — 38,780)
Aerospace Studies (9), Electrical Engineering (9)

Laboratory Technician I
($18,819 — 22,140 — 25,461)
Pharmacology (7)

Laboratory Technician II
($22,483 — 26,540 — 30,417)
Medicine (1)

Personnel Assistant
($20,417 — 24,020 — 27,623)
Human Resources (10)

Professional Engineering Officer III
($43,542 — 51,226 — 58,910)
Physical Plant (1), Medicine (1)

Research Officer III
($30,085 — 35,394 —40,703)
NCIC Epidemiology Unit (1)

Secretary I
($18,819 — 22,140 — 25,461)
Alumni Affairs (1), Physical Plant (1), Medical Genetics, Scarborough (7), Pathology (1), NCIC Epidemiology Unit, 80 percent full-time (1), Transitional Year Programme, 70 percent full-time (10), Radiology, 50 percent full-time (1), Victoria College, 10-month contract (7)

Secretary II
($20,417 — 24,020 — 27,623)
Immunology (11), Family & Community Medicine (1), Industrial Engineering (9), Innis College (10), Health Administration (10), Electrical Engineering (10), Psychiatric Division, Health Services (11), Community Health, 50 percent full-time (1)

Secretary III
($22,483 — 25,450 — 30,417)
Family & Community Medicine (1), Industrial Engineering, 10-month sessional appointment (9)

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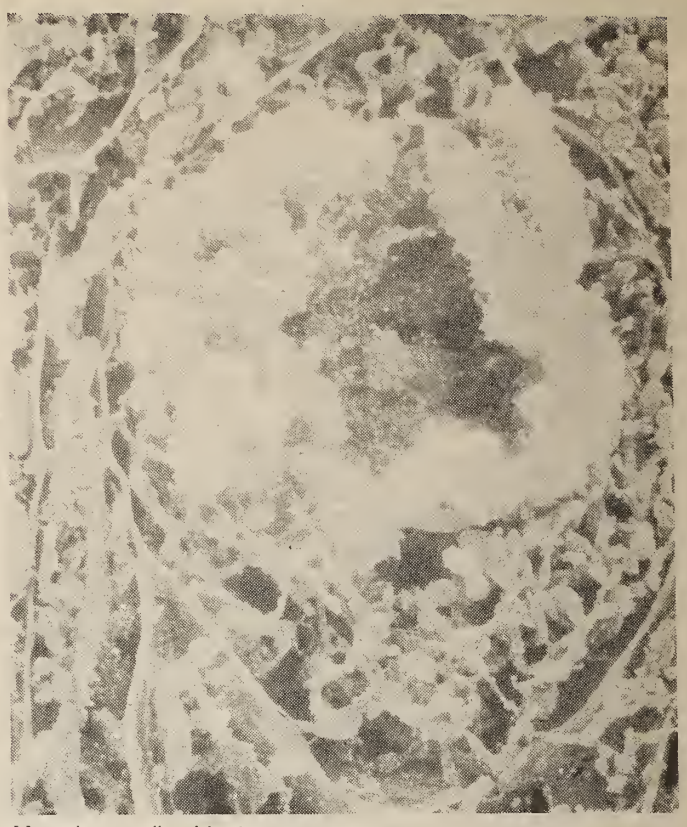
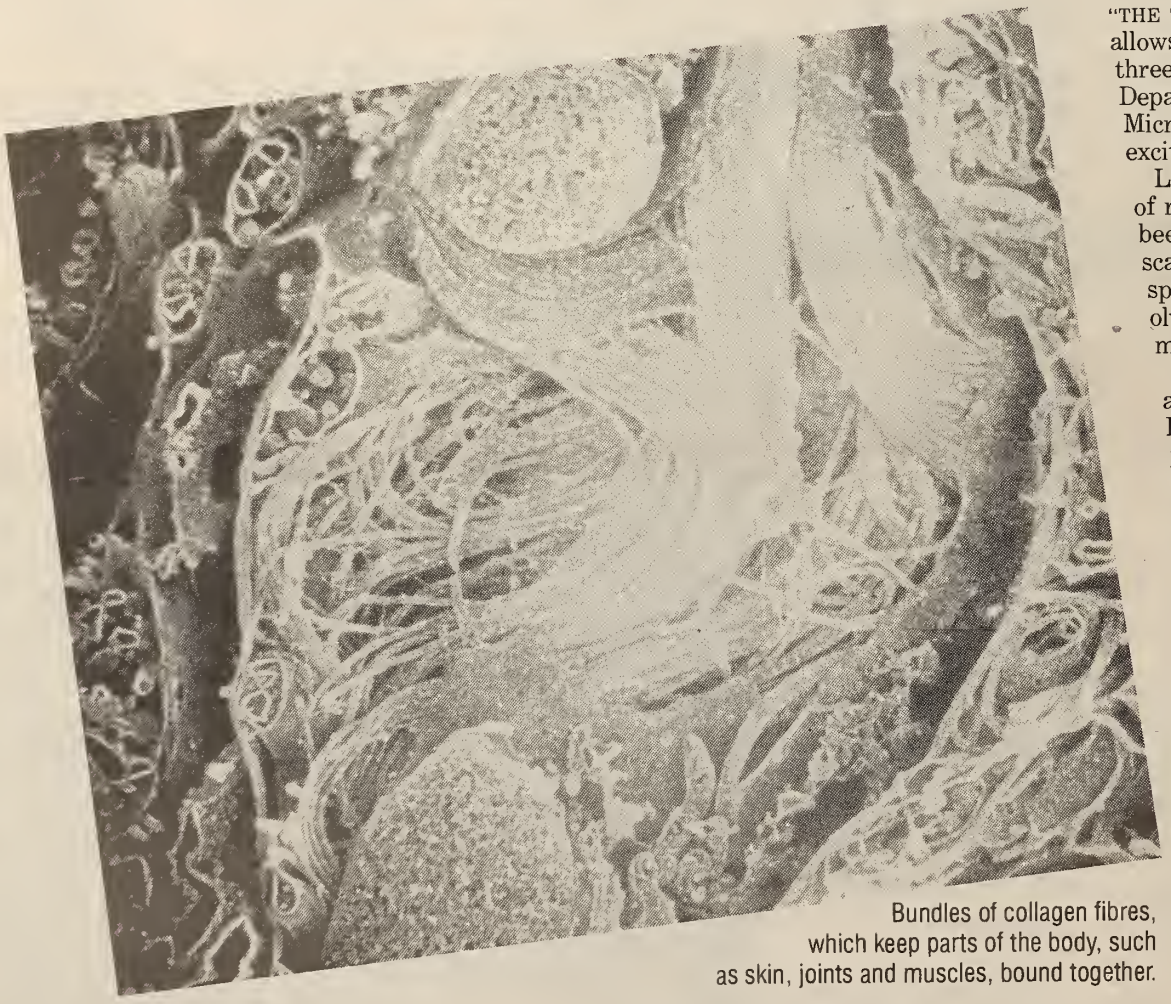
'Walking around inside a human cell'



Metaphase cell, with chromosomes.



Bundles of collagen fibres, which keep parts of the body, such as skin, joints and muscles, bound together.

"THE TECHNIQUE we're using to examine cells allows us to show their internal organization in three dimensions," said Peter Lea of the Department of Anatomy and the Electron Microscopy Laboratory. "This is a recent and exciting development."

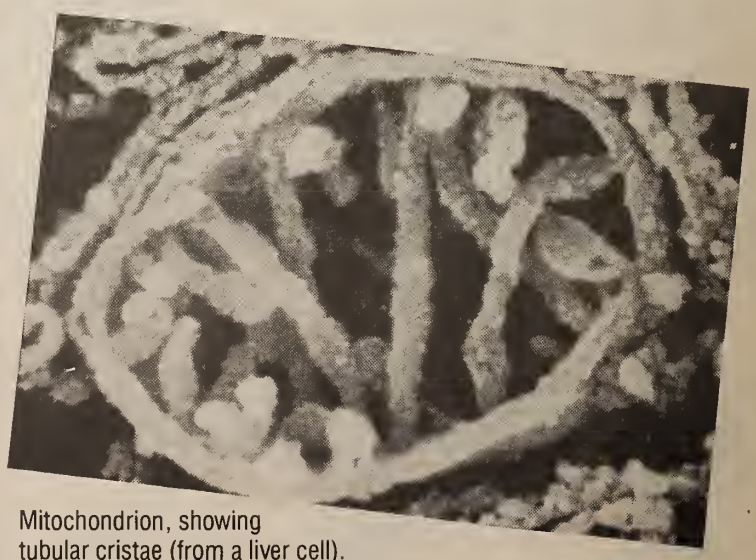
Lea and Martin Hollenberg, associate dean of research in the Faculty of Medicine, have been examining cells using a Hitachi S-570 scanning electron microscope. It has a special specimen imaging lens that gives better resolution than was previously available and can magnify things up to 100,000 times.

"We're able to offer an alternative explanation of the structure of mitochondria," said Hollenberg. "It was thought for about 30 years that cristae were shelf-like. Our results show that tubules are much more common than previously thought." Cristae are the tubes inside the mitochondria; mitochondria are the "batteries" that provide energy for the body.

The technique is being used in first-year histology classes at U of T. Hollenberg, Lea and David Cormack, also of the Department of Anatomy, are preparing a textbook, "Stereo Atlas of the Cell" for publication later this year. Each volume will contain pairs of stereo pictures and a stereo viewer.

"It's as though we can reduce ourselves in size and walk around inside a cell, visualizing its components in three dimensions" said Hollenberg.

Photo receptors: at the top are the outer segments of disks containing rhodopsin or visual pigment; at the bottom are inner segments of the photo receptors, with mitochondria showing.



Mitochondrion, showing tubular cristae (from a liver cell).

Classified ads have moved to the inside back page. See page 15.